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MINERAL INDUSTRY SURVEYS

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PETROLEUM PRODUCTS SURVEY
NO. 66

MOTOR GASOLINES, WINTER 1969-1970

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MOTOR GASOLINES, WINTER 1969-70

by

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INTRODUCTION

The properties of motor fuels sold through service stations in the United States are reported in accordance with a cooperative agreement between the American Petroleum Institute and the Bureau of Mines of the United States Department of the Interior. By agreement with the American Petroleum Institute, identification of the data by item number is confidential.

Analytical data for 5,118 samples that represent the products of 71 companies are included. Company representatives collected the samples during December 1969, January, and February 1970. As in previous surveys, the gasolines covered by this survey include those from both large and small suppliers. Laboratories of various refiners, motor manufacturers, and chemical companies obtained and submitted the data to the Bureau of Mines for compilation. Motor-gasoline survey reports published during the past 10 years are listed on page 4.

SUMMARY

The characteristics of motor gasolines for winter 1969-70 are summarized in table 1, and for comparison, those for winter 1968-69 are shown in table 2. Trends of some of the more important characteristics for several years are shown in figures 1 and 2. The following data show trends of national average octane numbers during recent years:

	Regular-price		Premium-price	
	Octane number		Octane number	
	Research	Motor	Research	Motor
Summer 1968	93.8	86.0	99.9	91.9
Winter 1968-69	93.8	86.3	99.8	92.2
Summer 1969	93.8	86.1	99.9	92.0
Winter 1969-70	93.8	86.3	99.8	92.2

Tables 3 and 4 show regional average octane numbers of regular- and premium-price fuels.

Included in table 5 are data for three other grades of motor gasolines as follows:

	Motor gasolines		
	Third grade	Intermediate grade	Super-premium
Brands	5	4	2
Items	20	14	9
Samples	87	76	10

Analyses for third-grade motor gasolines were published by the Bureau of Mines in survey reports during the late thirties and early forties. Tabulating data for this grade was resumed in the summer 1963 survey, and data for the intermediate grade fuels were included in the same survey. Super-premium motor gasolines have been represented in the survey reports since summer 1956, but the number of samples and brands have decreased greatly since the survey of winter 1960-61.

DISCUSSION OF DATA

Terms used in the surveys have the following meanings:

District: The designation of a marketing area for collecting samples and data. The present arrangement of 17 districts, developed by the CFR Committee, 1/ was selected with reference to the specifications on motor gasolines, refinery locations, population centers, and arteries of commerce such as navigable rivers. The States or parts of States in each district are indicated in the headings of table 3 and are shown in figure 5.

Brand: The gasoline sold within a given price group and by a given trade name.

Item: The index number assigned to a given brand in a given district. The data for each item represent the average of those submitted for that brand in that district. The number of samples represented follows the item number.

Sample: The supply of gasoline obtained at the service station and analyzed in the laboratory.

Table 3 presents by districts data for gravity in degrees API, sulfur, gum, lead, research- and motor-method octane numbers, Reid vapor pressure, and distillation characteristics of the motor fuels collected. The tests were made according to American Society for Testing and Materials standards. 2/

1/ Coordinating Fuel and Equipment Research Committee (formerly the Coordinating Fuel Research Committee) of the Coordinating Research Council, Inc. From 1935 to 1948 the motor-gasoline surveys were conducted under a cooperative agreement between the Coordinating Research Council and the Bureau of Mines.

2/ American Society for Testing and Materials, 1969 Book of ASTM Standards, Part 17, Petroleum Products -- Fuels; Solvents; Burner Fuel Oils; Lubricating Oils, Cutting Oils; Lubricating Greases; Hydraulic Fluids, Philadelphia, 1969, 1,180 pp.

Corrosion test results are not included in the district tables as all the reported numbers are "1," according to the corrosion scale given in table 1 of ASTM D 130. 2/

Gum test data are reported to the nearest whole number. The distillation temperatures, corrected to barometric pressure at 760 mm Hg, are those for percent evaporated.

Average values follow the tabulated data in table 3 for the respective grades of fuel shown in each district. The averages of the various properties were computed without reference to the total number of samples represented by each item.

The district averages from table 3 are shown in table 4. Data in the second column in table 4, no. of brands, are the averages of all brands in each district. The national averages for each of the properties of fuels sold in each of the 17 districts are given at the end of the table.

Table 5 shows data, for their respective districts, for third grade, intermediate grade, and super-premium motor gasolines.

Figures 1 and 2 illustrate trends in the national averages of certain properties of regular- and premium-price gasolines, respectively, since the summer of 1946. Averages for the winter surveys are plotted on the lines that represent the years and for the summer surveys between the lines. Octane-number points are connected for successive surveys, but those for Reid vapor pressure and distillation temperatures are plotted separately for summer and winter surveys. Charts that show plots of these properties from 1935 (except winter 1941-42 and summer 1942) are presented in the survey report on motor gasolines for winter 1964-65 and preceding reports. 3/

Figures 3 and 4 illustrate distribution (frequency) of octane values by numbers of samples for all grades of fuel represented. Each bar represents one-half octane number.

The districts, locations, and numbers of samples of gasoline represented are listed in table 8 and shown on the map in figure 5. The locations are named for the principal cities in the respective vicinities, and include suburbs and adjacent communities. The area of the circle at each location is proportional to the number of samples obtained. The summary at the end of table 8 lists by district, the number of locations, samples, and the percentages of the latter based on the total reported.

3/ Blade, O. C., Motor Gasolines, Winter 1964-65. Bureau of Mines Petroleum Products Survey No. 40, 38 pp. (in cooperation with the American Petroleum Institute).

In tables 6 and 7 are tabulated by whole octane ratings, the cumulative percentages of samples of all grades for each district by the research- and motor-methods, respectively.

This report does not discuss the significance of the data presented. Reference may be made to the ASTM specification 4/ for motor gasoline and its appendix, "Significance of ASTM Specifications for Motor Gasoline," at a technical library.

LIST OF MOTOR-GASOLINE SURVEY REPORTS, 1960-70

Author	Season and Year	PPS Report No.	Date Published	No. of pages
In cooperation with the American Petroleum Institute				
Blade, O. C.	Winter 1959-60	15	June 1960	33
Do.	Summer 1960	17	Dec. 1960	34
Do.	Winter 1960-61	20	June 1961	34
Do.	Summer 1961	22	Jan. 1962	32
Do.	Winter 1961-62	25	June 1962	33
Do.	Summer 1962	27	Jan. 1963	32
Do.	Winter 1962-63	30	June 1963	32
Do.	Summer 1963	33	Jan. 1964	35
Do.	Winter 1963-64	35	June 1964	40
Do.	Summer 1964	37	Dec. 1964	40
Do.	Winter 1964-65	40	July 1965	38
Do.	Summer 1965	43	Jan. 1966	39
Do.	Winter 1965-66	45	June 1966	38
Do.	Summer 1966	48	Dec. 1966	38
Do.	Winter 1966-67	50	June 1967	38
Do.	Summer 1967	53	Dec. 1967	38
Do.	Winter 1967-68	55	June 1968	39
Do.	Summer 1968	58	Jan. 1969	38
Do.	Winter 1968-69	60	July 1969	38
Blade, O.C. and Ella Mae Shelton	Summer 1969	63	Jan. 1970	38
Shelton, Ella Mae and C. M. McKinney	Winter 1969-70	This report		

4/ American Society for Testing and Materials, Tentative Specifications for Gasoline (D439-69T): 1969 Book of ASTM Standards, Part 17 (see footnote 2), pp. 167-176.

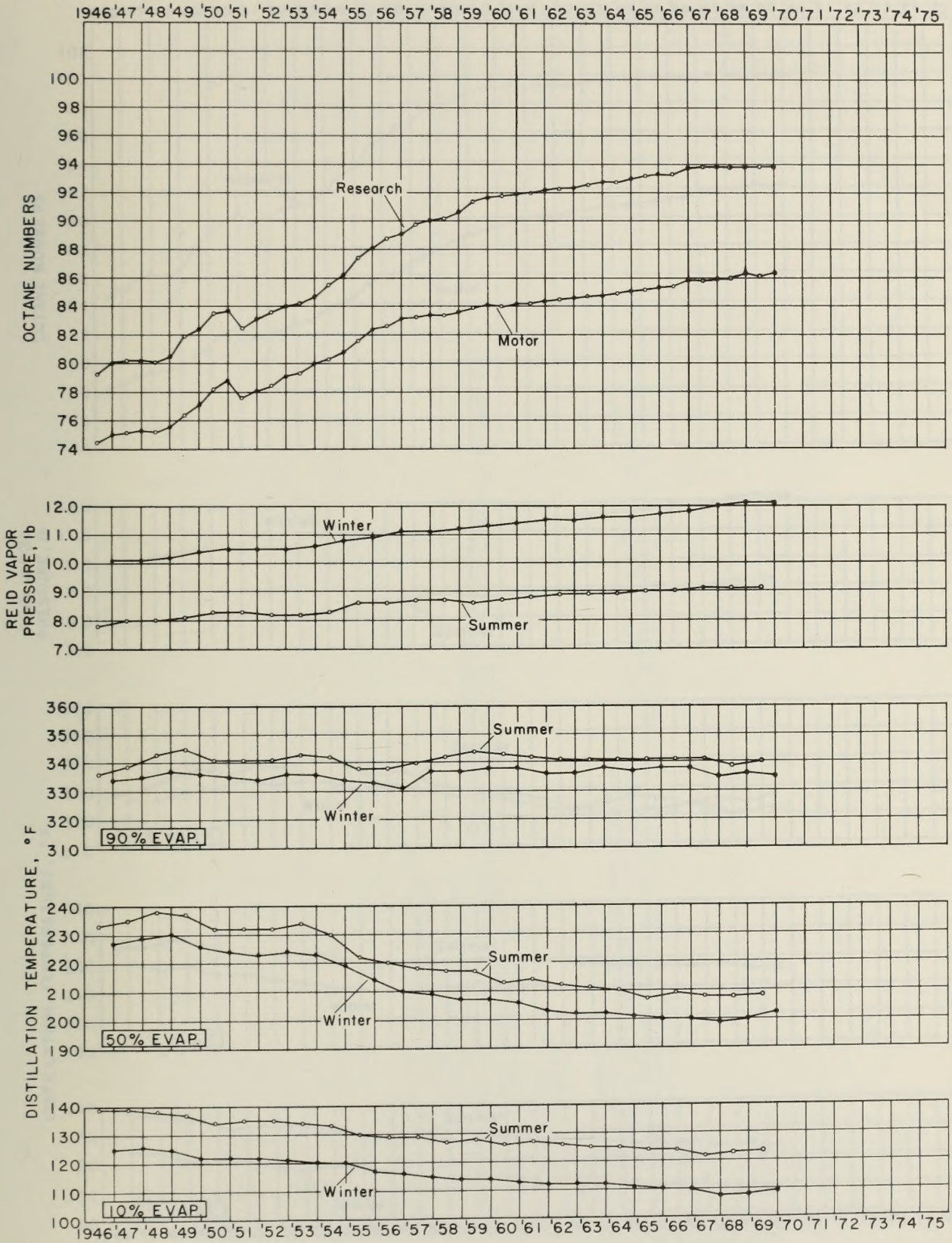

FIGURE 1.–Trends of Certain Characteristics of Regular-Price Gasolines.

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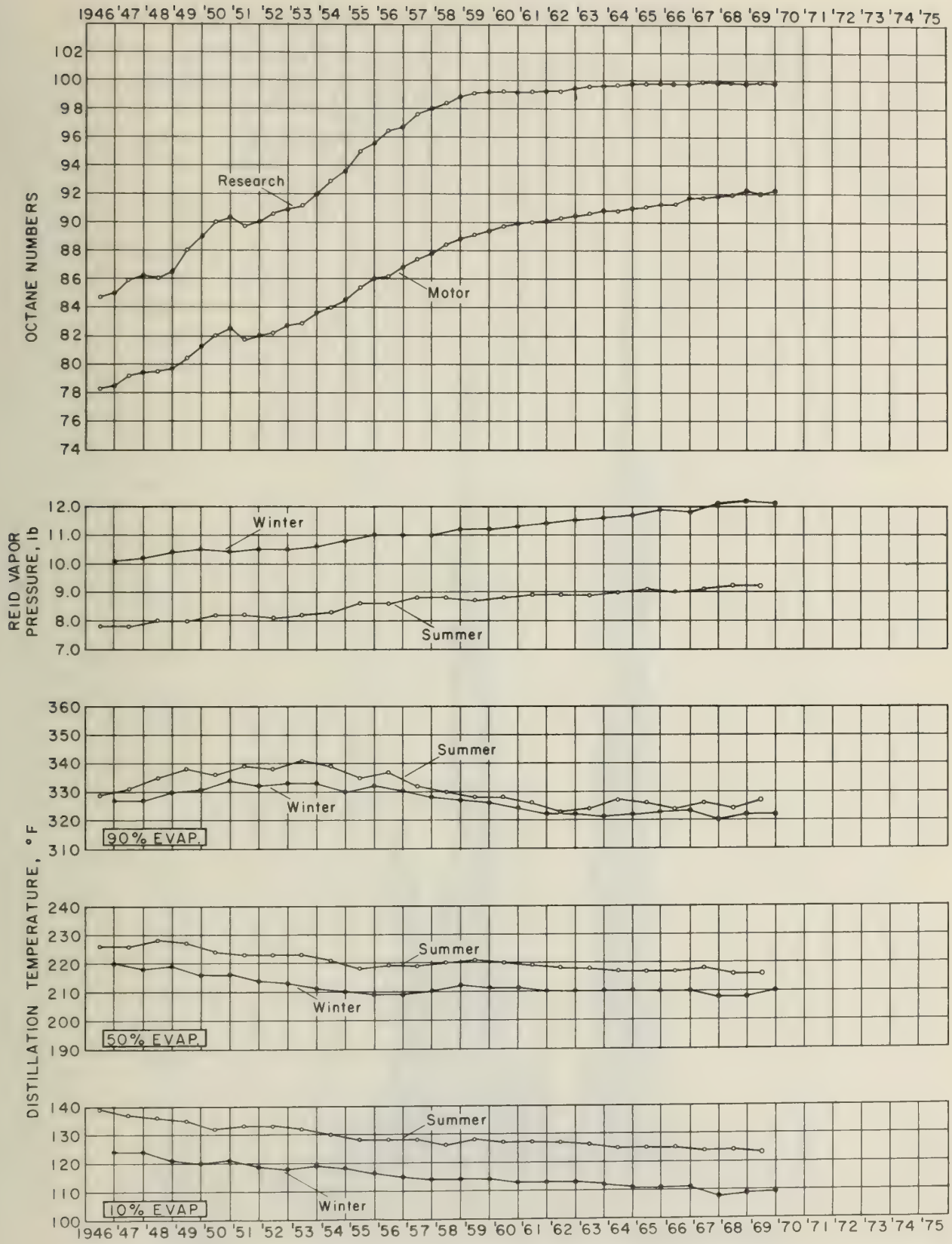

1946 '47 '48 '49 '50 '51 '52 '53 '54 '55 '56 '57 '58 '59 '60 '61 '62 '63 '64 '65 '66 '67 '68 '69 '70 '71 '72 '73 '74 '75
OCTANE NUMBERS
Research
Motor
REID VAPOR PRESSURE, lb
Winter
Summer
DISTILLATION TEMPERATURE, °F
90% EVAP.
50% EVAP.
10% EVAP.

FIGURE 2.—Trends of Certain Characteristics of Premium-Price Gasolines.

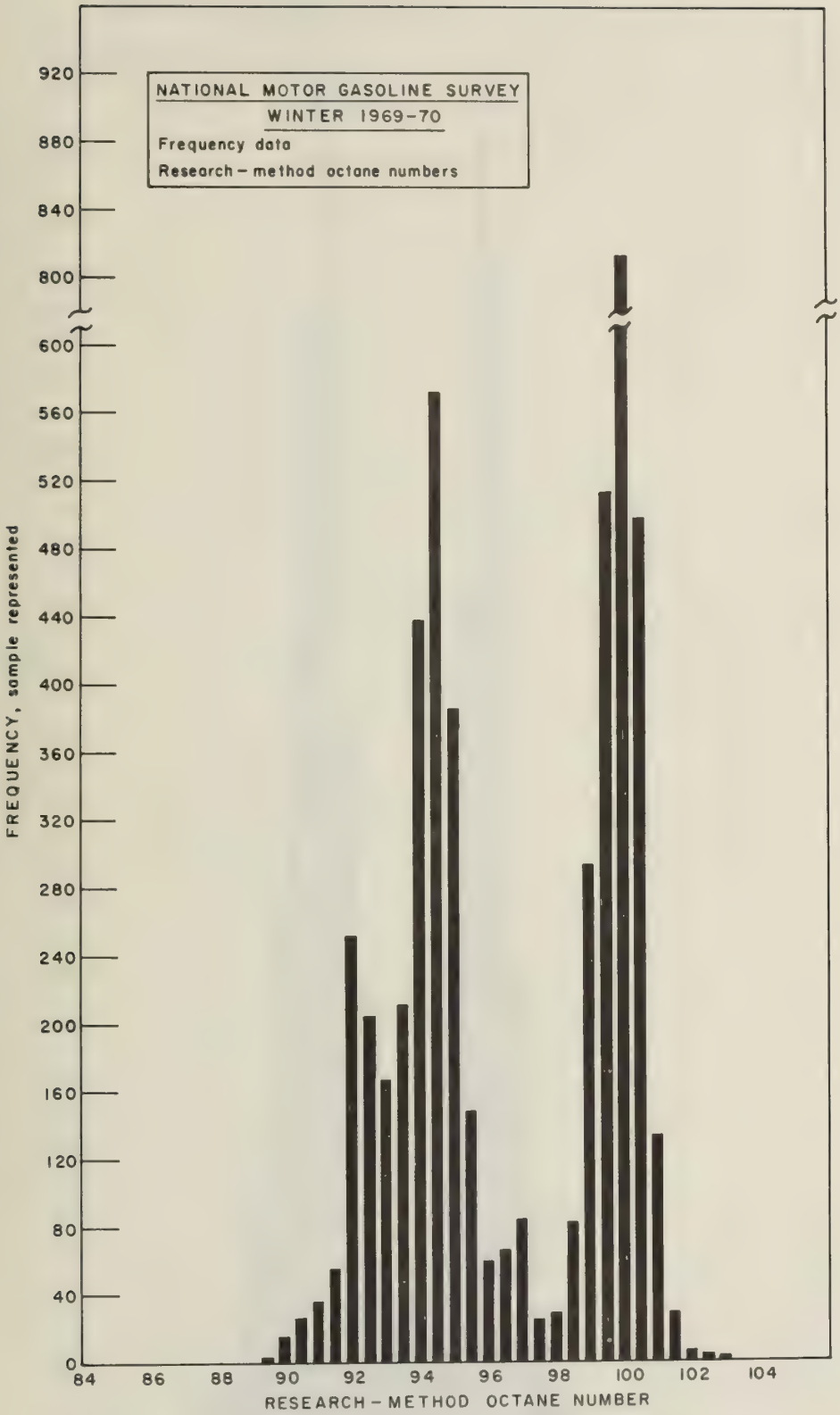


FIGURE 3.- Distribution of Research-Method Octane Numbers.

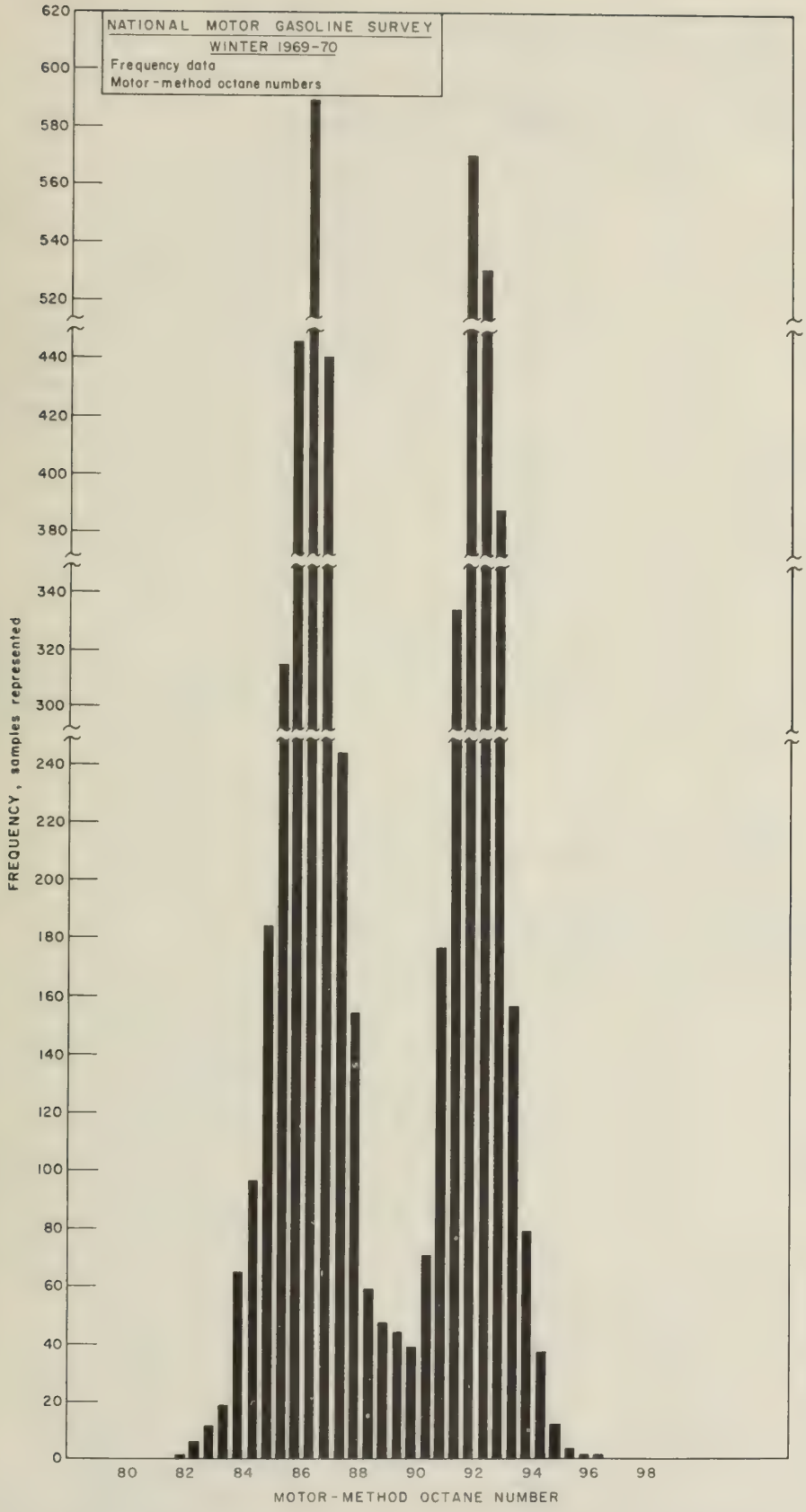


FIGURE 4.-Distribution of Motor-Method Octane Numbers.

TABLE 1. - Summary of values, motor gasoline survey, winter 1969-70

Test	ASTM method	Regular-price gasoline Average	Premium-price gasoline Average
Gravity, ° API	D287	63.0	62.9
Corrosion, No.	D130	1	1
Sulfur content, wt percent	D1266	0.043	0.020
Gum, mg per 100 ml	D381	2	1
Lead, g per gal	D526	2.26	2.71
Octane number, Research	D908	93.8	99.8
Octane number, Motor	D357	86.3	92.2
Reid vapor pressure, lb	D323	12.1	12.1
Distillation test on evaporated basis	D86		
Initial boiling point, ° F		83	83
5 percent		96	95
10		109	109
20		130	133
30		153	158
50		202	210
70		256	255
90		335	323
95		368	355
End Point		411	403
Residue, vol percent		1.0	0.9
Distillation loss		2.1	2.3

TABLE 2. - Summary of values, motor gasoline survey, winter 1968-69

Test	ASTM method	Regular-price gasoline Average	Premium-price gasoline Average
Gravity, ° API	D287	62.9	63.1
Corrosion, No.	D130	1	1
Sulfur content, wt percent	D1266	0.043	0.031
Gum, mg per 100 ml	D381	1	1
Lead, g per gal	D526	2.13	2.69
Octane number, Research	D908	93.8	99.8
Octane number, Motor	D357	86.3	92.2
Reid vapor pressure, lb	D323	12.1	12.2
Distillation test on evaporated basis	D86		
Initial boiling point, ° F		83	83
5 percent		96	95
10		108	109
20		129	132
30		151	157
50		200	208
70		256	253
90		336	322
95		369	354
End point		410	402
Residue, vol percent		1.0	0.9
Distillation loss		2.1	2.2

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS

DIST. 1 NORTHEAST
MAINE, MASS., N.H., VT., AND NORTHERN N.Y.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
1	4	64.1	0.150	1	2.96	95.8	86.1	12.7	82	94	107	126	145	192	257	352	384	415	0.9	2.1
2	6	63.1	.063	1	2.74	94.8	86.8	13.0	78	89	102	126	152	204	259	338	369	410	1.1	3.6
3	5	62.5	.023	1	2.68	94.7	87.2	12.3	83	93	106	125	147	200	260	353	378	415	.9	2.5
4	8	63.0	.036	1	1.31	95.1	86.2	14.8	74	94	105	126	149	202	262	342	375	420	1.1	3.2
5	7	60.6	.050	1	2.39	95.0	86.7	11.6	84	96	113	136	160	211	270	337	365	416	1.0	2.9
6	1	62.9	.031	1	3.01	94.9	87.9	12.9	82	89	103	123	146	198	261	355	385	412	1.0	3.0
7	3	64.5	-	-	-	95.1	87.0	12.6	92	99	109	125	144	189	255	337	367	413	1.1	2.3
8	5	62.8	.010	1	2.73	94.4	87.9	12.0	80	89	103	124	149	211	270	335	358	394	.9	3.2
9	8	62.9	.049	0	1.79	95.0	86.2	12.6	79	91	108	130	153	202	262	340	372	413	1.1	2.8
10	3	63.0	-	-	2.43	95.2	86.7	12.2	80	94	110	134	158	206	264	344	376	414	.9	1.1
11	3	61.9	.022	2	1.58	94.7	86.8	13.1	81	92	104	124	146	198	259	354	388	418	.9	2.9
12	8	64.0	.032	2	2.07	94.9	86.8	12.1	81	95	111	135	159	210	262	329	357	401	1.1	2.8
13	6	63.2	.070	1	1.99	95.8	85.7	12.4	79	96	111	133	156	203	257	339	372	419	1.0	2.6
14	1	64.7	.022	2	2.51	94.4	88.4	11.8	85	96	108	126	143	186	238	317	356	402	1.0	2.0
15	2	62.6	-	-	1.94	94.8	86.7	13.2	76	92	108	134	159	209	272	354	384	420	.6	1.4
AVERAGE		63.1	.047	1	2.30	95.0	86.9	12.6	81	93	107	128	151	201	261	342	372	412	1.0	2.6
SAMPLES	70																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 1 NORTHEAST--CONTINUED
MAINE, MASS., N.H., VT., AND NORTHERN N.Y.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
16	4	53.0	0.003	1	.00	100.3	89.7	12.6	77	86	102	124	151	222	262	313	340	386	0.9	3.2
17	6	61.2	.018	1	2.88	100.4	91.8	12.8	78	93	103	126	152	216	271	334	358	393	1.0	2.8
18	5	62.0	.014	1	2.99	100.7	91.3	12.2	78	90	104	125	149	204	252	330	361	404	1.0	2.8
19	7	69.6	.014	1	2.39	100.2	92.4	14.4	75	95	107	129	151	198	249	317	357	396	1.1	2.9
20	7	62.8	.008	1	2.56	100.1	92.2	12.7	79	92	108	131	156	210	260	324	356	404	1.0	2.7
21	1	63.2	.029	1	3.14	101.0	91.4	13.5	82	89	104	124	145	197	247	315	353	400	1.0	3.0
22	3	63.4	-	-	-	99.6	92.9	12.3	89	98	107	123	142	203	264	320	348	401	1.1	1.9
23	5	60.2	.010	1	2.71	100.2	92.5	12.2	79	87	101	121	144	220	277	331	353	390	.9	2.9
24	8	61.4	.012	1	2.35	100.2	92.7	13.4	77	91	106	130	155	213	263	327	356	408	1.0	3.5
25	3	63.3	-	-	2.83	100.8	92.5	11.9	80	94	106	126	150	204	242	314	354	394	.4	1.6
26	4	62.4	.016	1	2.46	100.7	92.2	12.5	76	87	101	122	148	208	252	318	353	405	.8	2.2
27	8	64.3	.013	2	2.60	99.9	92.2	12.3	80	94	109	132	156	206	255	318	348	407	1.2	3.1
28	4	61.0	.031	1	2.39	100.2	91.2	12.7	77	92	111	136	162	214	262	330	360	403	1.0	2.9
29	1	59.0	.016	1	3.09	100.2	92.6	12.6	72	80	97	119	148	212	263	328	362	412	1.0	3.0
30	2	61.3	-	-	2.92	100.2	91.7	13.1	76	85	102	130	160	222	270	330	354	380	1.0	4.0
AVERAGE		61.9	.015	1	2.72	100.3	92.0	12.7	78	90	105	127	151	210	259	323	354	399	1.0	2.8
SAMPLES	68																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 2 MID-ATLANTIC COAST
R.I., CONN., N.J., DEL., MD., VA., CENTRAL AND SOUTHERN N.Y., AND EASTERN PA.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES LOSS %	%
31	16	63.6	0.064	1	2.85	95.5	86.1	12.3	82	95	106	126	148	190	258	350	383	419	1.0	2.5
32	23	62.7	.031	1	2.53	94.7	86.6	12.5	81	92	106	128	151	200	255	339	374	411	1.1	2.5
33	22	63.4	.028	1	2.55	94.7	87.1	13.2	78	89	102	123	145	196	257	346	378	416	.9	2.6
34	9	64.0	-	-	2.35	94.7	86.5	13.3	77	90	103	121	143	189	247	339	374	410	.6	2.2
35	29	62.9	.034	1	1.54	95.4	86.0	14.4	77	89	103	125	149	204	264	345	380	416	1.0	3.6
36	27	61.4	.030	2	2.08	94.6	86.5	12.5	80	92	107	131	157	213	274	346	375	420	1.0	3.0
37	11	65.9	.022	2	2.00	94.8	87.9	12.2	85	96	106	121	137	181	245	331	362	414	1.0	1.9
38	4	59.2	.034	0	1.91	95.3	87.2	12.5	85	104	116	139	162	216	279	353	386	418	1.0	2.1
39	21	63.7	.037	1	2.35	94.5	87.1	12.5	80	92	108	132	155	205	261	343	376	417	1.0	2.6
40	26	62.2	.076	1	2.49	94.5	86.5	13.0	79	90	105	127	150	205	268	347	378	419	1.0	2.8
41	14	62.4	.049	1	1.62	95.3	85.7	13.0	80	90	103	125	148	200	259	332	359	394	.9	2.5
42	22	62.3	.023	2	1.57	95.1	86.9	12.9	76	87	99	119	143	200	264	347	374	413	1.0	2.5
43	30	64.4	.019	1	2.16	94.7	87.0	11.9	81	95	111	134	156	203	254	323	353	401	1.0	2.3
44	13	63.4	.039	0	1.45	96.0	85.3	13.3	80	90	102	121	142	189	255	347	375	406	.8	2.7
45	3	63.3	-	-	2.18	94.4	86.7	11.0	79	96	108	126	147	190	250	330	368	407	.2	.8
46	1	58.0	.041	0	1.50	95.5	86.3	12.4	86	101	114	140	169	228	289	356	391	418	1.0	1.5
47	9	60.4	.038	1	2.09	95.0	87.0	11.9	80	94	108	133	161	219	282	356	386	413	1.0	2.7
48	3	63.6	-	-	2.52	94.5	87.0	12.9	74	92	102	122	142	194	249	338	374	408	1.0	1.0
49	8	63.0	-	-	2.25	94.9	86.6	13.2	78	91	106	128	151	202	259	348	383	413	.9	2.1
50	2	60.7	.044	2	1.98	95.4	86.4	13.2	77	87	105	130	157	208	269	349	383	424	1.0	4.0
AVERAGE		62.5	.038	1	2.10	95.0	86.6	12.7	80	93	106	128	151	202	262	343	376	413	.9	2.4
SAMPLES	293																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 2 MID-ATLANTIC COAST--CONTINUED
R.I., CONN., N.J., DEL., MD., VA., CENTRAL AND SOUTHERN N.Y., AND EASTERN PA.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
51	16	57.0	0.034	1	.00	100.8	90.5	13.0	79	92	104	128	158	220	252	313	342	378	0.8	3.2
52	23	59.9	.008	1	2.65	100.1	92.2	12.6	78	89	105	129	159	218	269	330	358	401	1.0	3.2
53	22	62.5	.018	0	2.94	100.9	91.8	13.2	79	89	102	123	149	207	254	326	355	398	.9	3.1
54	9	62.3	-	-	2.66	100.8	92.1	13.1	79	91	105	126	151	212	260	329	360	393	.6	2.3
55	28	66.7	.012	1	2.07	100.6	92.0	14.4	77	90	104	125	146	197	247	313	334	389	.9	3.4
56	27	63.6	.009	1	2.36	100.1	92.1	12.6	79	93	107	130	153	209	257	320	351	401	1.1	2.8
57	11	65.0	.014	1	1.86	100.0	92.8	12.3	86	95	104	118	137	201	250	310	346	409	1.0	2.1
58	4	59.9	.029	1	2.87	101.2	92.0	12.3	81	96	111	135	162	223	274	329	361	394	.9	1.9
59	21	60.8	.015	1	2.54	100.3	92.0	12.7	82	93	109	132	158	216	265	328	357	406	1.0	2.2
60	26	60.9	.017	0	2.74	100.3	92.2	12.8	79	92	108	130	155	211	261	326	358	406	.8	2.3
61	13	61.2	.031	0	2.57	100.5	91.3	13.0	80	92	104	127	152	207	257	315	339	388	.7	2.6
62	24	62.8	.012	1	2.34	100.3	91.8	13.1	78	90	102	123	149	210	258	329	362	406	.9	2.6
63	30	62.7	.013	1	2.44	100.1	91.9	12.3	81	94	111	135	161	213	258	318	348	404	1.0	2.4
64	16	61.7	.039	1	1.98	100.9	91.4	13.4	78	90	101	122	146	204	253	318	347	379	.7	2.8
65	3	59.8	-	-	2.49	100.5	92.0	11.7	80	102	114	136	164	220	268	332	358	390	1.0	1.5
66	1	61.0	.028	1	2.73	101.2	91.6	12.3	84	98	110	133	160	220	273	328	366	410	1.0	2.0
67	9	60.7	.010	0	3.06	101.1	92.4	12.8	78	92	103	123	148	214	267	329	352	391	.9	3.2
68	3	63.2	-	-	3.05	100.8	92.6	13.7	78	92	106	128	154	212	258	328	360	410	1.0	2.0
69	8	60.0	-	-	2.85	100.2	91.4	13.3	78	89	104	128	156	213	269	331	356	394	.6	2.7
70	2	58.9	.028	1	3.37	100.6	91.2	14.2	81	92	105	134	167	229	275	332	350	396	1.3	6.3
AVERAGE		61.5	.020	1	2.61	100.6	91.9	12.9	80	93	106	128	154	213	261	324	353	397	.9	2.7
SAMPLES	296																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 3 SOUTHEAST
N.C., S.C., GA., FLA., ALA., AND EASTERN TENN.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES LOSS %	%
71	18	64.0	0.038	3	2.58	95.2	86.1	11.1	87	98	114	137	159	205	261	339	373	420	1.1	1.5
72	11	62.8	.049	2	2.99	94.5	86.8	11.6	84	96	110	132	153	203	255	333	374	413	.9	2.4
73	3	61.9	-	-	2.11	94.8	86.6	11.8	82	101	112	134	156	208	269	366	395	418	1.0	1.0
74	13	62.4	.016	0	2.41	94.7	86.7	12.4	82	96	107	127	149	200	260	354	382	415	.9	1.8
75	3	61.8	-	-	2.22	94.5	86.6	11.5	82	99	112	134	155	202	266	352	380	424	.6	1.4
76	17	60.6	-	-	1.47	94.7	86.0	12.0	81	93	110	133	157	209	266	341	374	418	1.0	1.8
77	27	61.7	.026	1	2.67	94.5	86.9	11.0	86	97	114	138	162	211	265	338	371	422	1.0	1.7
78	1	-	-	-	-	95.4	86.3	10.6	94	102	121	143	166	215	265	335	368	427	1.0	2.0
79	17	64.8	.023	2	2.38	94.5	87.7	11.4	89	100	112	130	150	197	256	332	363	411	1.0	1.7
80	27	63.4	.013	-	1.29	94.3	86.3	11.7	86	96	114	138	162	211	263	340	373	422	1.0	1.9
81	3	64.5	-	-	2.45	94.9	85.9	12.7	80	101	114	134	152	190	250	340	376	400	.6	1.4
82	9	61.6	.042	-	2.03	94.7	86.4	11.8	80	99	111	130	153	204	262	350	382	418	.9	1.3
83	20	62.0	.016	2	1.98	94.4	87.1	11.2	87	97	115	137	160	208	264	341	373	424	1.0	1.7
84	6	60.5	.023	2	2.25	95.7	87.4	10.7	84	97	112	132	155	210	275	352	380	416	.9	1.8
85	34	61.9	.034	2	2.05	94.1	86.2	10.9	86	97	116	141	164	213	264	334	366	416	1.1	1.9
86	12	62.9	.024	2	2.28	94.4	86.6	11.4	84	100	113	134	158	205	262	347	379	414	.8	1.8
87	1	61.6	.062	1	2.94	94.9	86.9	11.3	76	94	109	130	154	214	275	344	379	416	1.0	2.0
88	6	61.9	-	-	2.38	95.2	87.3	10.9	85	99	112	134	158	209	260	336	365	397	.7	1.4
89	9	61.7	.040	-	1.96	94.8	86.2	11.7	83	97	109	131	153	205	265	349	379	414	.6	1.7
90	6	63.2	-	-	2.73	94.4	86.4	11.2	79	98	111	132	153	200	255	341	378	405	.7	1.3
AVERAGE		62.4	.031	2	2.27	94.7	86.6	11.4	84	98	112	134	156	206	263	343	376	416	.9	1.7
SAMPLES	243																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 3 SOUTHEAST--CONTINUED
N.C., S.C., GA., FLA., ALA., AND EASTERN TENN.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
91	18	54.6	0.002	1	.00	101.2	90.8	11.9	83	96	114	140	168	220	264	334	364	413	1.1	1.8
92	11	59.9	.015	2	3.15	100.3	92.2	11.2	82	93	106	125	150	211	265	329	352	385	.9	2.1
93	3	62.0	-	-	2.72	100.1	92.1	12.6	82	96	108	128	151	203	250	312	347	400	.7	1.3
94	13	61.7	.007	0	2.81	100.5	92.0	12.0	83	95	109	132	157	213	259	327	363	407	.8	1.6
95	3	61.7	-	-	2.85	100.6	91.9	11.7	80	90	104	126	152	211	254	313	343	384	.6	1.9
96	17	65.3	.014	-	2.47	100.1	92.8	11.8	82	97	113	136	160	210	257	326	359	413	1.0	1.6
97	27	64.6	.016	2	2.71	100.1	93.0	11.3	85	96	114	137	161	211	259	327	359	411	1.0	1.7
98	1	-	-	-	-	101.0	90.7	11.1	93	102	121	143	166	215	265	335	368	427	1.0	2.7
99	17	64.0	.011	1	2.59	100.1	92.5	11.6	88	100	112	130	150	205	255	320	353	404	1.0	1.6
100	27	61.3	.010	-	2.36	100.0	92.5	11.8	84	96	114	139	165	215	262	331	363	417	1.0	2.0
101	3	62.4	-	-	3.29	100.4	92.5	11.0	84	102	116	138	162	214	258	324	354	390	1.0	2.0
102	9	62.8	.028	-	2.82	100.2	92.2	12.1	81	96	109	131	157	209	254	324	356	402	.9	1.6
103	20	63.5	.009	5	3.01	100.1	92.8	11.5	86	96	114	137	159	208	261	336	367	419	1.0	1.6
104	6	60.3	.012	1	2.82	100.3	92.2	10.3	85	98	112	134	159	215	264	337	369	409	1.0	1.8
105	33	62.2	.009	5	2.79	100.0	92.3	11.0	86	97	116	141	166	214	262	330	361	417	1.1	1.9
106	12	61.5	.015	2	3.18	100.2	92.5	11.8	81	94	107	130	155	216	267	328	361	405	.8	1.8
107	1	62.9	.037	2	3.07	100.5	93.0	11.9	81	92	105	124	147	210	265	324	359	406	1.0	2.0
108	6	60.9	-	-	2.92	101.5	92.9	11.6	83	100	114	137	165	224	270	326	357	394	.9	1.7
109	9	62.5	.010	-	2.76	100.5	92.1	12.1	81	99	111	135	156	209	257	327	356	393	.6	1.5
110	6	60.5	-	-	3.04	100.1	92.3	11.8	81	99	111	133	158	222	282	338	365	398	.7	1.7
AVERAGE		61.8	.014	2	2.85	100.4	92.3	11.6	84	97	112	134	158	213	262	327	359	405	.9	1.8
SAMPLES	242																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 4 APPALACHIAN
OHIO, W. WA., WESTERN N.Y., WESTERN PA., EASTERN KY., AND PART OF MD.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
111	8	62.3	0.050	2	2.61	94.4	86.8	11.6	80	94	106	126	148	196	259	343	382	427	1.0	1.7
112	11	63.6	-	-	2.37	94.2	86.8	12.5	77	92	106	129	152	200	256	348	387	430	.9	1.7
113	11	62.5	.065	1	2.50	94.6	86.8	13.1	79	91	105	126	150	202	259	343	380	425	1.0	1.8
114	6	62.2	-	-	1.65	94.7	87.1	13.1	74	89	103	124	150	205	261	334	363	391	1.0	1.8
115	14	62.3	-	-	1.67	94.6	86.8	12.9	79	93	110	132	156	207	265	343	377	424	1.1	2.1
116	20	61.8	-	-	2.01	94.6	86.9	12.3	80	92	110	133	158	209	266	341	372	417	1.0	2.0
117	3	66.2	-	-	3.07	93.9	88.4	12.9	76	89	100	120	138	184	242	312	340	380	.8	2.2
118	6	62.9	-	-	2.05	95.2	86.6	13.4	79	93	108	130	152	205	270	346	375	413	.8	1.8
119	3	63.3	-	-	2.21	93.7	88.1	13.0	76	84	110	134	156	200	248	310	336	380	.8	2.7
120	9	65.0	-	-	-	95.0	87.2	13.3	88	95	104	119	138	189	254	340	375	418	.9	2.2
121	3	62.1	-	-	2.00	94.8	88.6	13.5	78	88	102	122	146	194	250	316	342	384	.7	3.3
122	16	63.9	.040	1	2.15	94.4	86.9	12.4	79	93	108	130	154	206	261	337	369	415	.9	1.9
123	15	63.5	-	-	2.27	94.3	86.9	12.5	80	93	109	131	154	204	257	331	363	409	.7	2.0
124	3	62.9	-	-	2.51	94.4	87.2	11.9	78	98	112	132	155	205	259	344	380	424	.8	1.7
125	15	63.7	.018	3	1.78	95.3	86.9	14.4	77	87	100	122	147	197	251	323	353	392	.8	3.0
126	17	61.5	.010	1	1.76	94.6	87.1	13.5	77	88	104	128	154	211	271	354	385	421	.9	3.1
127	18	64.5	-	-	2.55	94.3	87.1	11.6	82	97	115	138	161	208	259	329	361	414	1.2	1.7
128	10	62.2	-	-	2.19	95.8	86.9	12.6	80	92	107	130	154	206	260	327	369	407	.9	1.8
129	3	59.7	-	-	2.15	95.2	86.6	13.7	76	88	102	124	150	212	278	366	400	430	.8	2.7
130	3	62.5	-	-	2.81	93.7	87.7	11.2	84	102	120	148	170	208	246	292	314	358	.6	2.4
131	1	62.8	-	-	1.63	94.0	86.4	-	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE		62.9	.037	2	2.20	94.6	87.1	12.8	79	92	107	129	152	202	259	334	366	408	.9	2.2
SAMPLES	195																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 4 APPALACHIAN--CONTINUED
OHIO, W. WA., WESTERN N.Y., WESTERN PA., EASTERN KY., AND PART OF MD.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
132	8	57.7	0.002	1	.00	100.6	90.4	12.5	81	93	106	129	159	212	252	315	346	388	0.8	1.8
133	11	64.0	-	-	2.66	100.2	92.6	12.5	77	90	106	134	163	213	257	334	369	422	.8	2.6
134	11	64.4	.004	1	2.67	99.9	92.7	13.4	78	90	105	129	157	211	248	316	348	391	.8	2.1
135	6	65.6	-	-	2.55	100.1	92.9	11.8	77	87	105	132	163	209	241	308	341	387	.6	2.7
136	1	61.1	.007	1	3.10	99.4	93.0	11.0	87	102	115	139	165	215	263	334	364	419	1.0	1.0
137	14	67.7	-	-	2.46	100.5	92.8	12.4	80	93	110	133	156	207	254	323	357	408	.9	1.8
138	20	65.3	-	-	2.32	100.2	92.6	12.3	79	94	111	136	161	212	256	323	355	407	.8	1.8
139	3	59.8	-	-	3.09	99.3	92.6	14.1	76	84	98	118	140	192	249	316	344	392	.7	3.3
140	6	64.7	-	-	2.93	100.2	92.4	13.7	77	88	104	128	158	215	257	336	373	422	.8	1.8
141	3	60.9	-	-	3.08	100.4	93.0	12.7	76	88	102	122	144	190	252	314	338	376	.7	1.8
142	9	64.1	-	-	-	99.9	92.3	12.9	87	96	106	123	146	203	253	318	349	395	1.1	2.1
143	3	59.7	-	-	3.02	100.1	92.8	13.6	80	88	100	120	142	196	248	312	338	378	.8	2.7
144	16	63.2	.035	1	2.25	100.1	92.3	12.8	79	92	109	134	162	215	258	329	363	415	1.1	2.0
145	15	62.4	-	-	2.68	99.9	92.8	12.7	81	97	113	135	159	207	255	322	347	401	.9	2.3
146	3	63.4	-	-	3.11	100.3	93.0	12.1	80	102	116	136	160	202	248	320	356	396	.9	.6
147	14	64.1	.016	1	2.30	100.3	92.5	14.4	76	87	99	120	144	199	248	320	349	389	.7	2.9
148	17	60.5	.004	1	2.34	100.1	91.9	13.3	77	88	104	129	159	219	264	331	360	400	.9	2.8
149	18	62.1	-	-	2.74	100.2	91.8	11.9	81	95	113	137	161	212	260	325	356	414	1.1	1.8
150	10	63.4	-	-	2.85	100.5	92.3	12.4	80	95	110	135	161	213	255	328	362	410	.8	1.3
151	3	66.6	-	-	3.03	101.0	93.8	14.7	72	84	96	118	147	208	253	324	360	410	.6	3.4
152	3	60.9	-	-	3.00	99.8	92.6	13.0	76	91	104	123	146	194	250	312	340	384	.5	1.5
153	1	67.5	-	-	1.88	99.9	92.3	-	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE		63.1	.011	1	2.70	100.1	92.5	12.9	79	92	106	129	155	207	253	322	353	400	.8	2.1
SAMPLES	195																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 5 MICHIGAN

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
154	12	62.8	0.076	1	2.41	95.4	86.1	12.2	82	92	111	135	158	208	260	329	358	409	0.8	3.0
155	4	64.1	.053	1	2.77	94.6	87.1	14.0	75	89	98	119	144	197	255	342	384	426	.7	3.0
156	1	63.9	-	-	3.02	95.0	87.1	-	-	-	-	-	-	-	-	-	-	-	-	-
157	3	63.3	-	-	2.18	94.6	86.6	13.4	70	82	95	116	142	202	254	336	370	416	.7	2.8
158	12	62.9	.030	2	2.04	94.5	86.7	13.2	81	94	112	135	159	209	263	337	377	422	.8	3.2
159	2	63.7	.060	3	3.04	94.9	86.9	13.4	77	85	98	119	141	195	253	342	390	418	.6	3.2
160	3	63.4	-	-	2.42	94.3	86.6	11.9	76	100	112	136	158	208	262	344	378	424	.6	1.4
161	6	62.9	.040	1	2.49	94.8	87.0	13.7	78	87	100	118	141	198	266	348	384	431	.7	2.2
162	1	64.4	.038	1	1.93	95.4	87.2	13.7	72	-	94	115	140	195	261	351	-	422	1.0	4.0
163	14	64.7	.044	1	2.29	94.4	87.3	13.0	81	94	110	132	156	207	262	335	370	421	.8	2.1
164	1	65.3	.020	3	2.69	94.2	86.0	13.8	80	83	97	117	142	196	248	331	376	410	.1	3.9
165	11	66.9	.019	1	2.71	93.6	87.3	13.0	82	95	112	135	159	207	257	327	358	411	.9	2.5
166	3	64.7	-	-	3.10	95.7	87.4	12.6	76	93	107	132	158	208	262	334	368	404	.8	1.2
167	4	63.9	.040	2	2.03	95.0	86.9	13.2	77	87	102	121	143	192	254	340	383	420	.6	2.7
168	8	61.8	.026	3	1.74	94.8	87.2	13.9	78	93	109	135	162	216	274	350	397	427	.9	3.6
169	21	62.9	.036	2	3.15	94.7	86.7	12.0	83	96	114	138	162	211	261	331	363	417	.9	2.5
170	7	62.5	.029	3	2.29	95.5	86.8	12.9	78	90	103	127	147	205	263	338	374	418	.6	2.2
171	1	63.8	.027	1	2.44	94.0	87.1	12.7	75	-	100	130	154	204	260	362	-	420	1.0	5.0
172	1	63.9	.052	1	2.84	94.8	87.2	13.8	70	88	93	114	139	194	251	336	372	417	1.0	3.0
AVERAGE		63.8	.039	2	2.50	94.7	86.9	13.1	77	91	104	126	150	203	259	340	375	419	.8	2.9
SAMPLES	115																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 5 MICHIGAN--CONTINUED

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
173	12	65.0	0.022	1	2.05	100.1	92.0	12.2	82	93	110	133	156	206	252	319	353	406	0.8	2.9
174	4	66.8	.013	0	2.94	99.8	93.0	14.4	75	83	97	119	147	204	243	309	347	392	.6	2.9
175	1	64.0	-	-	2.52	100.3	92.6	-	-	-	-	-	-	-	-	-	-	-	-	-
176	1	66.1	.020	2	3.16	99.5	94.0	13.2	77	85	99	122	149	205	249	319	371	424	.2	2.8
177	3	66.1	-	-	2.31	100.2	92.7	11.2	77	93	107	128	157	206	246	319	356	408	.6	1.4
178	12	67.9	.020	2	2.41	100.0	93.2	13.0	81	92	112	137	163	213	256	327	362	417	.6	3.4
179	2	67.3	.020	0	3.07	99.8	92.8	14.2	77	83	97	121	148	204	241	322	371	407	.7	3.4
180	3	64.7	-	-	2.75	99.7	92.5	11.2	79	99	112	134	161	211	250	316	347	408	.3	1.7
181	6	65.3	.030	1	3.13	100.2	92.8	12.5	80	91	105	129	161	216	252	327	370	417	.7	2.8
182	1	66.6	.028	1	2.33	99.2	91.6	13.8	74	80	96	126	148	210	249	338	374	434	1.0	3.0
183	14	62.1	.029	1	2.17	100.0	92.2	13.2	79	91	110	136	165	216	260	332	367	419	1.0	3.3
184	1	63.1	.020	3	3.25	99.4	94.0	12.8	81	84	99	123	151	207	253	332	406	439	.2	3.8
185	10	63.4	.011	0	2.59	99.5	92.8	12.1	84	96	113	135	159	208	258	325	358	412	.8	2.1
186	3	64.5	-	-	3.28	100.1	93.5	12.0	76	92	110	138	170	216	246	308	340	402	.7	1.3
187	4	63.3	.020	3	2.29	100.3	92.6	13.3	77	91	104	126	153	208	253	322	362	398	.3	2.7
188	8	60.5	.016	2	2.24	99.6	91.9	14.0	79	85	110	136	164	218	266	335	370	418	.9	4.2
189	19	60.6	.022	2	3.01	99.2	91.7	11.5	85	97	115	140	165	212	258	325	358	416	.9	2.5
190	8	65.0	.019	3	2.72	100.5	92.7	12.5	78	90	106	131	158	210	250	319	357	404	.7	1.9
191	1	65.5	.006	1	2.53	100.0	94.4	12.5	78	-	101	130	161	207	239	320	-	395	1.0	4.0
192	1	66.4	.009	1	2.85	99.9	94.3	14.3	80	-	97	117	140	198	237	304	-	387	1.0	4.0
AVERAGE		64.7	.019	1	2.68	99.9	92.9	12.8	79	90	105	130	157	209	250	322	363	411	.7	2.8
SAMPLES	114																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 6 NORTH ILLINOIS
NORTHERN IND., NORTHERN ILL., EASTERN IOWA, AND WIS.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
193	17	63.5	0.047	1	2.44	94.9	86.2	12.2	82	93	109	131	154	202	254	329	359	407	1.0	2.4
194	8	64.5	.031	2	2.75	94.5	86.7	13.1	83	93	108	130	154	205	259	336	370	423	.9	2.7
195	7	63.2	.033	0	2.36	94.4	86.7	13.2	83	91	102	121	144	198	255	340	375	410	1.1	2.4
196	1	68.3	.010	2	2.32	93.5	85.5	12.0	83	93	103	118	137	193	242	326	364	409	1.0	1.0
197	6	63.9	.059	-	2.56	95.2	86.7	12.6	84	95	104	122	145	196	252	323	350	385	.8	2.0
198	7	63.9	.031	2	2.51	94.6	86.6	13.0	84	95	111	133	156	205	258	334	369	422	1.0	2.4
199	1	66.1	.007	1	3.23	94.7	89.0	11.3	80	93	103	119	137	179	232	314	351	405	1.0	1.0
200	3	62.7	.029	-	2.90	95.1	87.8	13.5	80	88	97	114	138	200	274	347	377	414	.9	1.6
201	13	65.6	.025	2	1.95	94.7	86.5	12.8	84	95	107	126	145	195	252	330	365	411	1.0	2.0
202	14	64.8	.026	1	2.44	94.3	87.6	12.7	82	93	108	130	153	203	259	334	368	414	.9	2.4
203	11	63.8	.028	-	2.29	93.9	86.9	12.2	84	96	109	130	152	200	253	327	356	403	.8	2.2
204	3	62.5	.083	-	3.11	94.7	87.2	12.7	82	92	102	122	145	195	245	311	337	365	.8	2.7
205	6	62.7	.063	-	2.27	93.7	86.5	12.5	80	90	102	122	146	195	251	332	362	397	.9	1.9
206	14	63.1	.024	1	2.68	94.4	86.6	12.2	84	94	109	131	154	204	259	331	362	408	.8	2.3
207	6	63.4	.061	-	2.67	95.1	86.6	13.4	82	91	100	119	143	197	250	330	362	397	.9	2.4
208	3	65.4	-	-	2.18	94.6	87.0	13.2	81	92	101	118	137	186	242	338	381	412	.4	1.6
AVERAGE		64.2	.037	1	2.54	94.5	86.9	12.7	82	93	105	124	146	197	252	330	363	405	.9	2.1
SAMPLES	120																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 6 NORTH ILLINOIS--CONTINUED
NORTHERN IND., NORTHERN ILL., EASTERN IOWA, AND WIS.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
209	17	64.3	0.015	1	2.46	99.7	92.1	12.4	82	94	110	132	157	206	251	319	349	404	0.9	2.3
210	8	66.9	.011	1	2.79	99.4	92.6	13.6	83	94	109	131	155	207	254	329	356	411	.9	2.9
211	7	64.9	.015	1	2.82	99.7	92.7	13.4	80	91	100	123	148	203	244	315	349	391	.9	2.6
212	1	65.5	.012	2	2.32	98.8	91.9	11.5	82	92	103	121	142	192	248	329	368	421	1.0	2.0
213	6	65.2	.015	-	2.83	99.8	92.8	13.2	81	90	101	121	146	199	240	310	346	393	.9	3.4
214	7	64.9	.016	2	2.74	99.4	92.4	12.9	86	96	111	133	158	208	255	330	366	417	.8	2.4
215	1	62.1	.007	1	2.98	100.0	92.0	12.6	78	88	100	124	152	210	259	331	360	416	1.0	1.5
216	3	62.1	.013	-	3.21	99.7	93.4	12.1	81	98	110	135	164	217	252	315	346	386	1.0	1.5
217	13	65.6	.011	1	2.74	99.6	93.0	12.5	85	95	109	129	152	205	253	326	361	416	1.0	2.3
218	15	62.1	.016	1	2.29	99.6	92.3	12.9	82	94	110	135	164	215	259	330	364	417	.9	3.0
219	11	63.3	.021	-	2.81	99.3	93.1	12.1	84	95	111	135	162	213	257	326	358	405	.9	2.3
220	3	63.0	.019	-	3.16	99.2	93.0	12.3	83	94	105	128	155	206	242	300	330	377	1.0	3.0
221	6	62.6	.017	-	2.95	99.6	93.1	12.2	82	95	107	129	156	214	261	327	357	401	1.0	2.1
222	15	62.8	.009	2	2.97	98.8	91.9	12.1	84	95	111	135	161	208	252	317	346	406	.9	2.6
223	6	64.8	.017	-	2.55	99.6	92.5	13.2	83	92	103	124	149	202	240	302	333	381	1.1	2.5
224	3	69.1	-	-	2.51	99.5	93.2	12.6	82	93	103	120	140	189	231	310	352	408	.9	1.1
AVERAGE		64.3	.014	1	2.76	99.5	92.6	12.6	82	94	106	128	154	206	250	320	353	403	.9	2.3
SAMPLES	122																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 7 CENTRAL MISSISSIPPI
WESTERN KY., SOUTHERN IND., SOUTHERN ILL., AND EASTERN MO.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
225	10	62.9	0.046	2	2.27	95.1	86.9	12.0	79	95	109	131	154	203	257	333	365	405	0.9	2.0
226	3	63.8	-	-	2.37	94.1	87.1	13.2	75	84	100	124	148	201	258	356	392	424	1.1	2.9
227	10	63.1	.110	1	2.84	94.7	87.3	12.2	79	93	109	131	155	207	264	343	376	422	1.1	2.0
228	1	62.5	-	-	2.67	94.9	86.8	11.7	80	98	112	134	159	206	258	340	371	400	.7	1.3
229	3	63.3	-	-	2.51	94.4	87.0	12.7	82	92	105	125	146	195	252	341	379	422	1.1	1.9
230	2	63.8	-	-	2.64	94.4	86.6	11.6	82	89	101	120	143	194	254	337	370	408	.9	2.1
231	4	62.5	-	-	1.50	95.3	86.8	14.8	76	81	93	112	134	198	270	362	390	420	.8	3.7
232	7	61.7	-	-	2.15	94.5	87.1	12.7	79	89	103	123	148	199	258	335	366	404	1.0	2.6
233	2	64.4	-	-	2.66	95.2	87.6	12.1	84	98	111	131	154	197	240	303	330	401	.3	1.7
234	7	62.5	-	-	3.06	95.2	88.2	12.7	78	92	108	131	155	209	269	345	376	420	1.1	1.8
235	6	67.3	-	-	2.04	94.6	87.5	13.1	86	95	102	116	132	176	239	331	365	411	1.0	1.9
236	2	62.3	-	-	2.75	95.1	87.3	12.5	78	94	108	130	154	200	250	338	374	396	.5	1.5
237	13	64.5	.014	3	1.97	94.6	87.1	12.4	80	95	110	131	155	206	261	334	367	416	1.0	1.8
238	4	63.6	.080	1	1.99	93.9	87.1	13.3	81	89	99	116	139	195	253	322	346	382	.9	2.1
239	3	64.0	-	-	2.38	94.6	87.8	13.4	76	90	102	120	140	189	254	350	388	432	.9	2.1
240	3	62.7	-	-	2.74	94.1	87.3	12.3	82	95	112	136	158	209	267	360	392	416	1.1	1.9
241	7	62.3	-	-	2.21	94.7	87.4	12.6	81	93	106	127	151	206	261	340	372	406	1.0	1.9
242	12	61.9	-	-	2.60	94.3	86.8	11.9	80	95	113	138	163	213	266	339	369	416	.9	2.4
243	2	60.6	-	-	2.80	95.0	87.6	11.2	83	94	107	128	154	222	292	354	384	426	.9	1.6
AVERAGE		63.1	.063	2	2.43	94.7	87.2	12.5	80	92	106	127	150	201	259	340	372	412	.9	2.1
SAMPLES	101																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 7 CENTRAL MISSISSIPPI--CONTINUED
WESTERN KY., SOUTHERN IND., SOUTHERN ILL., AND EASTERN MO.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
244	10	64.1	0.013	1	2.30	99.9	91.8	12.2	80	93	109	131	155	206	251	318	352	399	1.0	2.0
245	3	58.6	-	-	3.23	100.9	92.2	13.8	80	87	104	130	162	229	285	362	390	424	.7	3.8
246	10	63.9	.006	2	2.92	99.6	92.7	12.7	81	92	109	132	156	207	253	325	358	411	1.0	2.1
247	1	63.4	-	-	3.47	100.6	92.3	11.7	80	94	112	142	170	218	254	322	350	380	.6	1.4
248	1	65.4	.004	1	3.37	99.9	92.8	14.2	77	88	101	123	148	198	236	303	332	384	1.0	1.5
249	3	60.1	-	-	3.02	99.6	93.5	12.0	79	93	105	133	167	226	258	307	332	391	.9	2.6
250	2	67.1	-	-	2.94	99.2	93.6	10.4	84	101	112	137	163	209	240	338	376	418	.9	2.1
251	4	66.6	-	-	2.58	100.3	92.8	14.4	82	91	101	118	142	197	238	293	320	380	.5	1.5
252	7	63.6	-	-	2.66	99.9	92.8	12.7	80	93	107	135	162	213	248	310	338	386	.8	3.2
253	2	69.5	-	-	3.12	100.0	93.2	12.7	78	95	108	130	153	198	230	321	360	410	.6	1.4
254	7	63.2	-	-	2.98	100.3	93.0	11.8	81	95	113	138	163	212	259	327	357	413	.9	2.2
255	6	67.3	-	-	2.67	99.8	93.2	12.5	85	95	104	120	141	197	248	321	357	406	1.1	2.0
256	2	63.9	-	-	3.44	100.6	92.2	11.5	76	95	113	140	164	221	259	326	352	386	.5	1.5
257	13	62.0	.011	1	2.28	99.8	92.3	12.4	79	93	110	134	164	216	258	328	361	412	.9	2.4
258	4	61.0	.001	1	2.64	99.2	92.8	13.1	80	85	105	139	173	218	249	310	334	387	1.0	4.1
259	3	60.5	-	-	2.93	100.4	92.5	13.2	76	88	102	125	154	218	280	352	382	424	1.0	2.5
260	3	62.6	-	-	3.25	100.5	92.7	11.2	84	101	113	133	152	198	238	300	330	388	.6	1.4
261	7	61.5	-	-	2.59	99.6	92.0	12.7	79	88	103	129	160	216	255	326	361	402	.8	3.0
262	12	62.5	-	-	2.95	100.1	91.5	11.6	81	96	113	137	161	210	258	324	354	410	1.0	2.0
263	2	65.2	-	-	3.48	100.2	93.1	11.6	82	103	118	140	164	212	251	310	340	394	.6	1.4
AVERAGE		63.6	.007	1	2.94	100.0	92.7	12.4	80	93	108	132	159	211	252	321	352	400	.8	2.2
SAMPLES	102																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 8 LOWER MISSISSIPPI
MISS., LA., EASTERN AND SOUTHERN ARK., AND WESTERN TENN.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES., ASTM D908	OCTANE NO MOT., ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES LOSS %	%
264	15	63.9	0.050	1	2.55	95.0	86.2	11.4	81	98	107	124	142	183	247	341	376	409	1.0	1.2
265	6	63.7	.040	-	2.61	94.3	86.9	11.8	81	92	103	122	143	186	238	329	368	406	1.1	2.2
266	3	62.3	.001	-	2.94	94.0	87.9	10.8	90	107	115	130	147	197	249	311	341	403	.8	1.2
267	8	61.1	.026	-	2.33	93.9	86.5	11.7	86	94	110	135	159	210	266	343	374	421	1.1	1.6
268	3	61.9	.044	-	2.28	94.2	86.1	10.8	84	97	109	130	153	205	261	338	370	419	1.2	2.3
269	14	61.7	.020	0	2.11	94.3	86.5	11.7	85	96	108	128	149	196	253	338	364	412	1.1	1.6
270	8	63.3	.030	-	2.16	94.6	87.0	12.7	79	93	109	132	155	205	258	336	369	417	1.3	1.9
271	16	62.6	.029	-	2.17	94.4	87.1	11.5	85	97	109	130	153	203	263	344	376	415	1.0	1.9
272	15	61.2	.057	-	2.10	94.3	86.9	11.5	83	95	106	126	148	200	261	338	369	413	1.0	1.7
273	9	62.0	.031	-	2.23	94.1	86.7	10.8	82	95	105	124	143	189	246	335	374	410	1.4	1.4
274	4	62.8	-	-	-	94.5	86.0	12.9	89	97	109	129	152	206	267	348	382	433	1.1	2.0
275	14	63.6	.021	-	1.61	94.3	86.6	12.3	83	92	106	128	151	199	252	335	367	411	1.1	2.0
276	12	61.9	.048	-	2.31	94.0	86.2	11.2	83	96	108	128	151	203	263	348	378	415	1.2	1.6
277	9	62.4	.042	-	2.64	94.2	87.0	10.9	82	96	108	131	154	201	251	332	369	415	1.1	1.7
278	3	63.1	.022	-	2.32	94.4	87.8	12.1	80	92	106	129	151	195	244	344	380	420	.8	1.3
279	6	63.0	.040	-	2.62	94.4	86.0	11.3	82	95	105	124	145	195	252	340	378	421	1.5	2.1
280	17	62.0	.037	-	2.40	93.9	85.9	10.8	86	97	112	135	158	206	256	325	356	400	.9	1.7
281	6	61.6	.043	-	1.62	94.4	86.3	12.0	80	92	102	121	146	198	261	346	379	415	1.1	2.0
282	6	60.6	.029	-	1.88	93.7	85.9	11.5	83	98	110	132	157	212	274	347	373	405	.9	1.4
AVERAGE		62.4	.034	1	2.27	94.3	86.6	11.6	83	96	108	128	150	199	256	338	371	414	1.1	1.7
SAMPLES	174																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70,
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 8 LOWER MISSISSIPPI--CONTINUED
MISS., LA., EASTERN AND SOUTHERN ARK., AND WESTERN TENN.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
283	15	58.0	0.005	1	.00	100.7	90.9	11.9	80	92	106	132	169	229	257	316	343	384	1.0	1.6
284	6	60.2	.012	-	2.89	100.0	92.3	11.8	80	90	100	119	139	195	258	327	347	399	1.1	1.7
285	3	59.8	.005	-	3.56	100.2	93.7	11.6	84	98	107	124	145	200	249	315	358	408	.9	1.1
286	8	63.5	.024	-	3.19	99.9	91.8	11.4	88	94	110	134	156	203	252	322	356	407	1.0	2.0
287	3	64.8	.056	-	2.92	100.1	92.2	11.8	82	96	109	134	164	215	254	339	375	420	1.2	1.8
288	14	63.3	.015	0	3.01	100.1	92.5	12.0	85	96	108	129	152	202	248	326	356	402	1.1	1.7
289	8	62.7	.030	-	2.53	99.9	92.1	12.9	82	93	109	134	160	212	258	331	366	414	1.0	2.6
290	16	65.6	.013	-	2.51	99.9	92.7	11.9	84	94	108	128	150	201	250	312	342	391	.9	1.6
291	15	63.0	.020	-	2.43	99.9	92.8	11.6	82	94	104	122	144	198	244	304	333	377	.8	1.5
292	9	63.4	.021	-	2.85	100.2	92.0	11.9	80	91	101	119	141	191	238	308	341	389	1.1	2.2
293	4	64.7	-	-	-	100.4	92.1	12.7	88	94	109	132	160	217	260	343	381	429	.9	2.2
294	14	61.5	.008	-	2.30	99.9	92.4	12.6	83	94	107	129	155	207	255	319	351	400	1.0	2.2
295	12	61.7	.027	-	3.00	100.0	92.6	11.0	84	97	110	133	161	218	262	325	357	404	1.0	2.1
296	9	64.8	.019	-	2.89	100.1	92.5	11.4	83	94	105	125	151	203	249	330	367	406	1.1	1.9
297	3	63.2	.012	-	3.02	100.2	92.6	12.8	79	89	99	117	139	193	263	342	368	406	.9	1.6
298	6	63.8	.039	-	3.18	100.2	92.6	11.5	83	93	107	129	159	220	269	338	372	422	1.4	2.7
299	17	62.7	.014	-	2.88	99.7	92.4	10.7	84	96	112	136	163	212	253	312	341	391	1.0	1.9
300	6	62.4	.014	-	2.97	100.0	92.5	12.3	81	91	101	120	141	196	247	306	335	388	.9	1.7
301	6	63.1	.017	-	2.61	99.6	91.6	10.8	84	99	113	135	157	200	242	304	283	380	.8	1.3
AVERAGE		62.7	.020	1	2.87	100.1	92.3	11.8	83	94	107	128	153	206	253	322	351	401	1.0	1.9
SAMPLES	174																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 9 NORTH PLAINS
MINN., N. DAK., AND S. DAK.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
302	12	67.2	0.011	2	1.46	92.0	85.2	12.5	85	98	112	131	155	196	240	302	326	391	1.0	2.0
303	4	61.8	.070	2	1.75	92.5	84.9	12.4	81	90	101	121	145	199	264	344	372	405	1.1	1.9
304	1	64.3	.060	1	1.93	92.5	85.0	11.6	82	92	104	124	146	197	253	335	369	421	1.0	2.0
305	3	67.3	-	-	1.37	92.0	85.4	12.8	87	98	109	128	148	186	220	275	302	348	.4	1.6
306	2	64.6	.041	-	2.05	92.6	86.0	12.0	84	96	104	118	134	173	227	312	347	394	1.1	1.9
307	3	66.2	.061	-	2.09	92.4	85.5	12.2	83	96	102	114	127	160	207	298	336	377	.6	1.9
308	6	64.8	.040	-	1.46	92.7	85.1	12.0	82	94	104	123	144	190	246	329	366	405	.9	2.1
309	4	61.9	.078	5	1.30	91.9	83.7	12.6	82	90	101	120	144	202	270	350	376	413	1.1	2.7
310	6	64.8	.034	-	2.03	92.5	85.5	12.4	84	95	103	122	143	192	246	333	368	412	1.0	2.0
311	9	62.8	.080	-	1.62	92.3	84.7	12.3	84	96	112	134	157	207	262	339	374	418	1.0	2.0
312	3	64.9	.041	-	2.18	92.1	85.2	11.8	83	99	107	125	145	192	246	331	367	411	1.2	2.3
313	3	65.7	.044	-	1.97	92.7	85.9	12.2	83	94	102	115	130	164	215	300	334	380	.7	2.3
314	10	64.0	.091	2	1.52	92.0	84.0	12.4	82	95	110	132	154	203	257	336	366	417	1.0	2.2
315	4	61.9	.078	2	1.34	92.8	85.0	12.3	80	88	100	122	147	205	268	348	376	413	1.0	2.8
316	6	64.1	.044	-	1.89	92.5	85.4	12.1	82	95	105	123	145	194	249	338	374	408	1.1	1.7
AVERAGE		64.4	.055	2	1.73	92.4	85.1	12.2	83	94	105	123	144	191	245	325	357	401	.9	2.1
SAMPLES	76																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 9 NORTH PLAINS--CONTINUED
MINN., N. DAK., AND S. DAK.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
317	12	69.4	0.010	1	1.54	99.2	92.0	12.8	84	95	109	130	152	201	247	319	348	407	1.0	2.1
318	4	66.4	.077	1	1.71	99.0	91.2	11.6	83	95	111	137	167	211	243	311	347	401	.9	2.7
319	1	65.8	.045	1	1.93	98.6	91.5	11.4	82	94	108	131	158	208	246	328	365	419	1.0	2.0
320	3	69.4	-	-	1.51	99.2	92.1	13.0	86	96	106	125	146	197	240	311	344	390	.8	1.7
321	2	64.6	.026	-	2.81	99.2	93.2	11.1	85	101	115	144	175	216	245	320	356	428	1.3	2.2
322	3	64.3	.024	-	3.32	99.3	94.4	11.1	81	95	104	133	166	210	240	307	337	378	.8	2.7
323	6	65.2	.024	-	2.53	98.9	92.1	12.3	85	96	109	132	159	208	245	315	349	395	.9	2.1
324	4	66.6	.077	2	1.79	99.1	91.3	11.7	81	93	109	136	166	209	239	307	337	399	1.1	3.2
325	6	64.8	.028	-	2.51	99.1	92.0	12.4	84	96	109	132	159	210	245	315	348	401	1.1	1.9
326	9	65.9	.071	-	2.37	99.0	91.8	12.0	84	98	115	140	165	212	254	326	346	413	1.1	2.2
327	3	63.1	.059	-	2.72	98.9	92.0	11.9	84	99	110	133	158	210	253	325	355	404	1.1	1.9
328	3	63.9	.029	-	3.01	99.4	94.3	11.1	84	101	114	144	175	217	243	307	337	388	.7	2.3
329	10	62.9	.013	3	2.94	98.8	91.0	11.7	83	96	114	138	164	211	254	319	327	402	1.1	2.4
330	4	66.2	.074	3	1.90	98.9	91.4	11.9	86	97	111	137	166	211	245	329	367	403	1.0	3.1
331	6	65.6	.036	-	2.47	99.0	92.2	12.0	84	95	108	132	160	209	243	312	345	400	1.1	2.2
AVERAGE		65.6	.042	2	2.34	99.0	92.2	11.9	84	96	110	135	162	209	245	317	347	402	1.0	2.3
SAMPLES	76																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 10 CENTRAL PLAINS
NEBR., CENTRAL AND WESTERN IOWA, NW MO., AND NORTHERN KANS.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
332	22	63.4	0.036	1	2.00	92.5	85.3	12.4	86	97	112	135	158	205	254	329	361	405	1.0	2.8
333	14	64.7	.031	1	2.34	91.9	85.6	11.6	87	97	112	134	156	203	255	338	375	423	1.0	2.3
334	14	64.6	.022	1	2.27	92.5	86.2	11.9	85	97	111	133	157	206	258	339	386	421	.9	2.2
335	5	65.2	.024	1	1.83	92.1	85.6	13.0	81	95	106	130	152	204	269	336	382	412	.9	3.1
336	4	64.5	.014	1	2.32	93.2	86.4	11.9	84	98	111	131	153	201	257	341	380	417	.9	2.2
337	18	67.6	.022	1	1.35	91.9	85.5	13.4	84	95	108	128	147	197	250	326	360	413	1.1	2.3
338	3	64.8	-	-	2.06	92.8	86.0	12.3	85	91	102	120	142	191	246	330	365	412	1.0	2.0
339	7	64.8	.026	1	2.40	92.3	86.1	12.3	84	97	107	126	147	197	251	339	382	418	1.0	2.0
340	14	63.5	.020	1	1.95	92.6	85.9	12.7	86	96	111	134	158	208	264	343	381	424	1.0	2.4
341	10	64.6	.034	1	2.33	92.0	85.7	12.0	85	98	107	125	146	196	253	342	381	420	1.0	2.4
342	11	64.7	.031	1	2.34	92.0	85.6	11.8	89	98	114	136	159	206	258	336	376	425	1.1	2.0
AVERAGE		64.8	.026	1	2.11	92.3	85.8	12.3	85	96	109	130	152	201	256	336	375	417	1.0	2.3
SAMPLES	122																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 10 CENTRAL PLAINS--CONTINUED
NEBR., CENTRAL AND WESTERN IOWA, NW MO., AND NORTHERN KANS.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
343	22	64.0	0.018	1	2.42	99.2	92.1	12.3	85	96	111	133	156	207	252	320	353	405	1.0	2.7
344	14	64.9	.017	1	2.72	99.1	92.3	11.7	88	98	113	136	159	210	260	336	369	420	1.1	2.2
345	14	66.0	.017	1	2.50	98.7	92.4	12.2	84	97	112	136	162	212	257	335	369	419	1.0	2.6
346	5	67.6	.018	1	2.01	98.8	93.4	12.4	83	101	114	143	171	213	246	328	380	412	1.0	2.4
347	4	65.5	.010	1	2.76	98.7	91.1	11.5	86	100	115	139	165	218	264	347	381	422	.9	3.1
348	18	69.4	.029	1	2.34	98.9	92.6	13.0	85	95	109	130	153	201	250	327	366	417	1.0	2.3
349	3	66.7	-	-	2.82	99.1	92.4	12.6	85	96	107	128	152	200	232	321	364	410	1.1	1.9
350	7	67.5	.020	1	2.69	98.9	92.9	11.7	84	98	109	131	157	206	243	325	365	408	.9	1.8
351	14	65.0	.013	1	2.71	98.6	93.2	12.3	86	97	114	139	165	213	258	329	365	417	1.0	2.6
352	10	66.8	.017	1	2.64	98.9	92.7	12.1	83	97	108	129	155	206	245	328	370	407	.9	2.1
353	11	65.2	.016	2	2.96	98.8	92.0	11.6	88	97	114	138	163	211	255	322	353	406	1.2	2.3
AVERAGE		66.2	.018	1	2.60	98.9	92.5	12.1	85	97	111	135	160	209	251	329	367	413	1.0	2.4
SAMPLES	122																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 11 SOUTH PLAINS
SOUTHERN KANS., SW MO., WESTERN ARK., AND NORTHERN TEX.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
354	7	64.2	-	-	2.94	92.4	86.6	11.4	88	100	110	126	145	188	245	333	372	413	1.0	1.6
355	7	62.7	0.021	2	2.11	92.2	85.9	12.2	81	94	111	135	159	207	256	329	361	417	1.1	2.1
356	6	63.7	.024	-	2.55	92.1	86.9	11.1	80	96	107	130	159	212	256	325	363	400	1.4	1.9
357	11	64.7	.041	2	2.16	92.4	85.3	11.3	84	102	112	131	150	189	236	343	389	414	1.0	2.1
358	3	64.0	-	-	3.03	92.9	86.3	10.6	88	110	122	141	160	203	244	340	378	425	.6	.7
359	3	64.4	.031	-	2.47	92.2	86.4	12.3	84	96	105	124	147	193	238	320	363	419	1.3	2.2
360	12	62.8	.029	1	1.75	93.5	86.2	12.0	84	98	110	129	151	199	255	336	368	407	1.1	2.4
361	8	64.7	.049	1	2.58	92.1	86.1	12.0	86	101	111	129	150	196	243	317	353	389	.8	2.2
362	4	66.8	.019	1	2.40	92.6	86.7	12.1	83	97	106	120	136	173	218	308	356	403	1.2	1.4
363	7	65.5	.030	0	1.97	92.1	85.6	12.5	87	96	104	120	138	187	244	330	364	407	1.0	2.3
364	5	61.8	-	-	2.10	94.1	86.9	11.0	84	98	110	132	158	214	272	344	366	414	1.0	1.5
365	8	62.4	.020	-	2.27	94.0	86.8	11.8	82	96	106	124	143	187	253	344	377	407	1.1	1.5
366	19	65.6	.025	1	2.03	93.0	86.4	12.5	84	98	111	129	149	196	249	337	378	421	1.0	2.2
367	3	65.0	-	-	2.89	94.2	87.1	12.6	86	104	114	130	150	192	243	356	393	428	.9	1.1
368	4	64.5	-	-	2.95	93.7	87.6	12.6	86	99	106	120	136	192	252	358	399	438	.8	1.2
369	7	64.9	.042	1	2.37	92.6	86.5	12.1	84	95	104	120	140	194	247	330	367	407	1.1	1.9
370	18	62.9	.020	1	2.31	93.0	86.3	11.8	82	97	112	132	155	202	256	337	372	416	1.0	1.8
371	12	63.9	.023	1	2.26	93.0	86.6	11.7	83	98	114	137	159	205	255	333	369	417	1.1	2.1
372	21	62.0	.057	1	2.83	92.8	85.5	11.1	86	99	113	135	157	206	257	332	365	407	1.0	2.0
373	3	62.8	-	-	2.18	94.5	86.6	11.9	86	96	108	130	156	211	267	351	387	410	.8	2.2
AVERAGE		64.0	.031	1	2.41	93.0	86.4	11.8	84	99	110	129	150	197	249	335	372	413	1.0	1.8
SAMPLES	168																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 11 SOUTH PLAINS--CONTINUED
SOUTHERN KANS., SW MO., WESTERN ARK., AND NORTHERN TEX.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) PERCENT EVAPORATED IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
374	7	64.3	-	-	3.15	99.5	93.3	11.5	84	98	108	133	163	216	259	340	374	415	0.9	2.1
375	7	62.4	0.013	3	2.60	99.3	91.9	12.6	78	92	108	131	155	207	258	326	358	407	1.1	2.1
376	6	67.2	.009	-	2.69	99.3	93.0	11.7	84	94	106	125	148	195	234	318	363	406	1.3	2.3
377	10	59.6	.016	1	2.74	99.6	91.9	11.6	86	101	118	129	148	205	273	343	366	401	1.0	2.1
378	3	66.2	-	-	3.10	99.6	93.1	10.4	84	106	121	148	176	216	256	301	316	325	.9	1.1
379	3	65.3	.014	-	2.53	99.8	92.5	12.9	82	91	101	120	143	200	248	323	350	394	1.3	2.7
380	13	60.9	.023	1	2.93	99.4	92.4	12.4	84	97	112	135	163	221	263	326	359	405	1.1	2.1
381	8	68.2	.045	1	2.29	99.1	93.9	12.1	83	97	111	138	166	207	236	314	349	395	.9	2.6
382	4	58.9	.028	1	3.00	100.1	93.1	12.5	83	96	108	128	150	220	278	341	383	417	1.1	2.7
383	7	63.8	.031	0	2.62	99.0	92.9	12.6	83	94	105	132	165	218	256	322	353	404	1.0	3.0
384	5	65.5	-	-	2.62	100.0	92.8	12.0	83	96	102	117	138	188	240	302	335	370	.9	1.1
385	8	64.8	.017	-	2.63	100.2	93.5	12.5	83	94	104	125	149	202	244	310	345	388	1.0	2.1
386	19	66.0	.020	1	2.41	99.4	92.3	12.5	84	97	109	127	147	196	254	336	375	418	1.0	2.4
387	3	68.6	-	-	2.73	99.5	93.7	11.8	85	100	112	136	162	206	246	340	394	418	.8	1.2
388	4	60.9	-	-	3.05	99.8	93.1	11.3	87	98	110	130	159	222	273	330	362	398	.8	1.2
389	7	65.3	.036	0	3.12	99.3	92.8	12.6	84	93	103	122	147	195	243	335	365	402	1.0	2.1
390	18	61.0	.018	1	2.95	99.5	92.5	12.3	82	94	108	132	158	215	264	331	363	412	1.1	2.1
391	12	62.0	.017	1	2.93	99.9	92.6	12.3	84	98	115	139	164	212	258	334	369	419	1.1	2.2
392	21	63.0	.014	1	2.87	98.9	91.7	11.3	86	99	116	139	165	213	254	314	345	397	1.1	2.2
393	3	60.1	-	-	3.25	100.2	93.4	11.3	85	100	115	145	181	235	266	322	358	392	.9	1.6
AVERAGE		63.7	.022	1	2.81	99.6	92.8	12.0	84	97	109	132	157	209	255	325	359	399	1.0	2.1
SAMPLES	168																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 12 SOUTH TEXAS

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
394	4	62.8	0.027	4	2.51	95.6	86.3	10.5	88	100	109	126	143	181	242	335	371	411	0.8	1.7
395	10	65.6	.040	1	2.74	94.0	87.5	11.7	90	99	114	135	156	201	253	333	372	414	1.0	1.8
396	3	64.4	.075	-	2.49	94.1	87.1	11.4	84	103	113	130	146	183	228	316	356	396	.5	1.5
397	11	63.6	.029	-	2.92	94.6	88.3	11.3	87	98	112	131	151	197	251	331	367	416	1.0	1.1
398	3	62.6	.025	-	3.40	95.0	88.5	11.2	85	98	111	131	150	195	241	330	372	424	.8	1.2
399	2	64.3	-	-	3.97	91.1	87.5	9.7	92	112	124	143	160	199	243	299	320	360	.4	1.6
400	13	62.1	.025	1	2.02	94.3	86.8	11.6	88	100	116	139	163	212	266	338	372	417	.9	2.1
401	13	62.1	.042	1	2.33	94.5	87.7	11.2	89	100	115	137	159	208	259	334	368	411	1.1	1.5
402	1	59.9	.015	2	2.20	94.7	87.4	11.9	80	97	110	140	176	238	272	322	360	386	1.0	1.5
403	2	65.3	-	-	3.67	93.3	88.4	9.7	94	119	130	148	162	187	213	266	320	383	.9	1.1
404	9	64.2	.022	-	2.20	94.0	87.5	11.3	93	101	114	136	158	205	259	337	371	419	1.1	1.1
405	6	63.9	.046	-	2.58	94.1	87.7	11.5	88	101	111	129	149	193	242	325	362	400	.8	1.3
406	4	64.7	.026	1	2.86	93.5	87.3	11.2	82	98	109	129	150	197	256	356	393	427	.9	1.1
407	3	63.8	.040	-	2.27	95.1	87.4	12.1	88	95	106	126	147	200	256	322	358	406	.9	1.6
408	12	61.6	.064	-	2.39	93.5	87.0	11.6	86	100	116	139	162	209	261	337	369	423	1.0	1.4
409	13	62.7	.032	1	2.51	93.7	86.5	10.6	88	103	119	142	166	212	260	331	364	404	.9	1.6
AVERAGE		63.4	.036	2	2.69	94.1	87.4	11.2	88	102	114	135	156	201	250	326	362	406	.9	1.5
SAMPLES	109																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 12 SOUTH TEXAS--CONTINUED

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
									PERCENT EVAPORATED											
410	4	53.6	0.001	0	.00	101.4	91.1	11.6	86	107	120	149	186	239	265	330	352	378	0.9	2.1
411	10	60.5	.017	1	2.90	99.8	92.6	11.9	86	98	114	137	161	215	269	340	375	420	1.0	2.0
412	3	61.2	.009	-	2.81	99.9	92.5	11.9	86	101	109	124	142	190	251	328	350	390	1.0	2.0
413	12	62.7	.016	-	2.89	100.0	93.5	11.6	88	99	115	139	164	213	258	332	365	413	.9	2.2
414	3	63.1	.023	-	3.39	100.2	94.1	12.0	86	103	118	147	177	217	250	321	350	382	.8	2.2
415	2	64.6	-	-	4.19	99.2	90.2	9.0	100	114	119	128	140	170	230	316	343	378	.4	.6
416	13	65.2	.018	1	2.51	99.9	92.4	11.4	88	99	114	135	158	207	256	320	351	399	.9	1.6
417	13	61.4	.015	1	2.76	100.2	92.5	11.4	89	97	113	135	157	207	257	326	358	407	.9	1.6
418	1	63.2	.032	2	2.41	99.8	92.4	12.3	80	94	118	128	158	210	254	326	362	382	1.0	2.0
419	2	60.3	-	-	2.64	99.8	92.7	11.7	83	104	116	142	172	222	264	348	386	424	1.4	1.1
420	9	63.2	.013	-	2.29	99.9	93.1	11.4	84	96	112	135	158	213	265	332	366	423	.9	2.0
421	6	62.2	.039	-	2.95	100.2	92.1	11.9	85	97	108	130	154	203	245	307	337	387	.9	1.2
422	4	61.2	.030	1	2.98	99.9	93.1	12.1	80	91	101	122	148	220	272	327	350	392	.9	1.6
423	3	64.1	.016	-	3.13	100.3	92.0	10.9	84	100	112	135	158	204	247	305	334	386	.8	1.7
424	12	60.5	.023	-	2.90	100.0	92.9	11.7	86	99	115	138	162	214	263	333	368	416	1.0	1.8
425	13	60.5	.019	1	3.06	99.9	92.8	10.3	87	103	120	146	171	219	262	324	358	412	1.0	1.5
426	3	62.3	.034	-	3.16	100.3	92.2	10.9	84	98	114	140	165	209	243	288	311	380	.8	1.7
AVERAGE		61.8	.020	1	2.94	100.0	92.5	11.4	86	100	114	136	161	210	256	324	354	398	.9	1.7
SAMPLES	113																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 13 SOUTH MT. STATES
SW KANS., OKLA. AND TEX. PANHANDLES, W. TEX., N. MEX., COLO., UTAH, ARIZ., NEV., AND E. CALIF.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
427	8	64.2	-	-	2.76	91.8	85.4	11.8	84	95	108	129	151	199	256	341	378	412	0.9	2.2
428	13	62.5	0.033	1	1.52	90.8	84.8	11.5	79	92	110	134	157	203	252	333	364	412	1.0	2.7
429	28	61.6	.074	2	2.47	93.0	85.9	11.4	85	96	114	139	163	213	263	336	367	419	1.0	2.5
430	3	59.1	.044	-	3.37	91.6	83.3	10.8	89	103	120	147	174	220	268	329	360	392	.8	2.2
431	19	64.1	.025	1	2.27	92.3	85.3	11.4	82	96	112	135	158	205	256	333	366	420	1.0	1.8
432	3	63.0	.113	-	3.16	91.3	83.7	11.1	88	100	113	132	151	191	236	303	333	374	1.0	1.0
433	35	63.4	.042	1	2.36	92.4	85.8	10.3	87	100	115	136	158	205	257	334	367	418	.9	1.4
434	1	60.7	-	-	1.93	92.0	83.6	-	-	-	-	-	-	-	-	-	-	-	-	-
435	17	61.0	.083	2	2.85	93.4	86.0	10.5	84	97	112	137	161	210	265	340	374	420	1.0	1.5
436	2	61.2	-	-	2.01	92.1	83.9	10.3	87	101	115	139	163	218	278	357	388	426	.5	1.5
437	3	66.3	-	-	2.74	92.1	86.0	11.2	85	99	109	128	148	191	235	317	364	409	.9	1.6
438	3	65.4	.003	-	2.13	90.8	87.1	11.7	88	97	112	136	159	192	217	259	289	354	.7	2.3
439	30	64.8	.045	1	1.86	92.2	85.3	11.2	85	98	114	136	157	203	255	335	370	420	1.1	1.7
440	16	65.5	.014	-	2.38	91.9	85.6	10.5	85	99	113	134	155	201	251	333	371	420	1.0	1.4
441	25	61.8	.046	2	2.15	92.9	85.6	10.0	88	101	117	138	160	207	263	342	375	419	.9	1.3
442	3	60.8	.128	-	2.25	91.4	84.4	10.2	90	106	120	142	168	222	272	332	359	394	.7	1.3
443	2	62.9	-	-	2.44	90.9	85.4	11.6	83	98	108	129	152	203	254	326	353	388	1.0	1.5
444	32	62.0	.061	1	2.31	92.8	85.5	11.3	85	98	112	134	156	204	259	342	375	417	.9	1.8
445	34	61.6	.039	1	1.79	93.0	85.3	11.1	85	98	115	138	161	208	260	342	376	424	1.0	1.9
446	3	59.2	.060	-	2.32	93.2	84.2	11.5	85	102	116	140	166	215	260	322	344	380	.8	1.2
447	51	60.9	.055	1	2.42	92.7	85.2	10.4	86	98	115	139	163	211	263	337	370	420	1.0	1.8
448	17	61.2	.083	2	2.20	93.9	85.5	10.8	88	99	116	139	162	211	264	340	373	421	1.1	2.4
AVERAGE		62.4	.056	1	2.35	92.2	85.1	11.0	86	99	114	136	159	206	256	330	363	408	.9	1.8
SAMPLES	348																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 13 SOUTH MT. STATES--CONTINUED
SW KANS., OKLA. AND TEX. PANHANDLES, W. TEX., N. MEX., COLO., UTAH, ARIZ., NEV., AND E. CALIF.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) PERCENT EVAPORATED IBP	5	10	20	30	50	70	90	95	EP	RES LOSS %	%
449	8	64.0	-	-	3.24	98.9	91.8	11.4	85	99	113	138	174	216	263	336	375	417	1.1	2.2
450	13	63.1	0.019	1	1.84	97.4	89.7	11.5	80	92	109	133	157	206	254	322	345	401	1.0	2.4
451	28	61.2	.040	2	2.72	99.1	91.5	11.2	84	96	113	138	164	216	264	336	368	418	1.0	2.2
452	1	59.0	-	-	2.91	97.0	88.5	-	-	-	-	-	-	-	-	-	-	-	-	-
453	3	51.9	.000	-	2.99	100.0	91.5	10.9	91	101	125	166	194	235	271	323	343	386	.7	3.3
454	18	64.5	.030	1	2.66	97.9	91.0	11.9	82	94	112	137	162	212	259	330	362	417	1.0	2.6
455	3	50.5	.004	-	3.23	100.0	91.1	10.9	89	101	126	165	195	239	280	338	358	406	1.0	3.0
456	35	63.5	.026	1	2.92	99.4	92.7	10.6	86	99	116	139	162	210	257	327	362	413	1.0	1.4
457	1	56.4	-	-	3.43	97.0	88.0	-	-	-	-	-	-	-	-	-	-	-	-	-
458	17	64.2	.033	1	3.09	99.8	92.6	10.2	86	100	116	139	162	210	255	323	355	404	1.0	1.6
459	2	57.1	-	-	3.38	97.1	88.2	10.2	85	101	119	148	179	235	287	355	383	423	1.1	2.4
460	3	68.3	-	-	3.05	99.5	93.9	11.5	84	97	108	125	150	201	237	319	367	405	1.1	1.9
461	3	56.5	.000	-	3.22	99.8	92.9	11.3	88	97	115	147	183	238	285	345	367	416	1.0	3.0
462	30	64.2	.029	1	2.42	98.8	91.9	11.5	85	97	114	138	162	213	261	331	365	418	1.1	2.0
463	16	66.7	.024	-	2.91	99.0	93.1	11.0	84	96	111	134	158	206	251	325	364	414	1.1	1.8
464	25	61.3	.029	1	2.75	99.7	92.3	10.5	86	100	116	141	166	215	262	330	359	414	1.0	1.5
465	3	59.3	.020	-	3.23	100.0	91.6	11.3	87	99	114	138	162	210	257	327	354	410	.8	1.7
466	2	60.9	-	-	3.04	97.1	89.0	11.7	82	96	108	130	157	212	265	356	392	421	1.1	1.4
467	32	63.2	.026	1	2.60	99.0	92.0	11.3	84	96	111	137	164	215	259	331	365	411	1.1	2.2
468	34	62.1	.017	1	2.21	99.2	91.8	11.5	84	97	115	140	167	217	264	333	363	417	1.0	2.3
469	3	55.4	.000	-	3.81	99.9	92.1	11.1	87	102	120	149	176	223	266	321	344	390	1.0	2.0
470	51	62.7	.017	1	2.67	98.6	91.8	10.4	86	98	115	139	163	211	260	329	361	416	1.1	1.6
471	17	61.3	.027	2	2.38	99.0	91.3	11.1	86	99	116	140	165	214	262	331	362	416	1.0	2.7
AVERAGE		60.8	.020	1	2.90	98.8	91.3	11.1	85	98	115	141	168	217	263	332	363	411	1.0	2.2
SAMPLES	348																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 14 NORTH MT. STATES
WYO., MONT., IDAHO, EASTERN WASH., AND EASTERN OREG.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES LOSS %	%
472	11	62.1	0.064	2	1.97	92.6	85.0	12.6	84	94	106	131	156	208	257	334	364	401	0.9	2.9
473	4	61.7	.036	2	2.69	93.6	87.0	12.1	83	96	109	135	165	218	268	336	370	414	1.0	2.0
474	12	63.8	.065	-	2.24	92.6	86.6	12.7	80	94	112	136	161	209	259	331	359	419	1.0	2.4
475	12	62.2	.058	2	1.85	92.4	84.3	12.7	82	96	112	136	162	213	263	337	370	411	1.1	2.8
476	6	63.5	.038	-	1.89	93.2	86.2	13.1	80	89	102	123	148	201	250	325	359	420	.9	2.4
477	6	63.4	.044	-	2.42	92.9	86.4	12.9	82	92	104	125	152	201	250	321	353	406	1.0	2.3
478	17	63.1	.057	3	2.46	92.5	85.4	12.6	83	95	110	132	156	205	258	337	374	422	1.0	2.6
479	4	61.8	.069	2	1.79	94.5	84.2	12.4	82	93	107	130	155	209	258	336	366	406	1.0	3.0
480	7	62.3	.051	3	2.50	92.7	86.1	11.7	84	96	107	128	153	204	254	330	367	412	.9	2.3
481	6	64.1	.042	2	2.01	93.3	85.9	12.6	84	98	114	138	163	211	261	331	362	415	1.0	2.6
482	15	62.2	.080	1	1.90	92.7	83.7	12.6	82	96	114	139	163	213	264	339	371	416	1.0	2.8
483	7	63.0	.042	1	2.54	92.8	86.6	12.5	83	97	110	133	157	209	261	329	361	409	.9	2.4
AVERAGE		62.8	.054	2	2.19	93.0	85.6	12.5	82	95	109	132	158	208	259	332	365	413	1.0	2.5
SAMPLES	107																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 14 NORTH MT. STATES--CONTINUED
WYO., MONT., IDAHO, EASTERN WASH., AND EASTERN OREG.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES LOSS %	%
484	12	64.0	0.029	1	2.65	99.0	90.6	12.5	81	91	104	128	155	207	247	309	337	388	1.0	3.0
485	4	65.4	.009	3	2.33	100.3	93.5	12.0	87	96	109	131	159	220	257	318	342	390	.9	3.1
486	11	65.4	.009	-	2.13	98.2	91.3	12.7	81	95	112	137	162	211	258	330	358	416	1.0	2.5
487	12	63.9	.024	2	2.87	99.0	89.9	13.0	84	96	111	135	162	215	258	323	348	404	.9	2.6
488	6	65.7	.007	-	2.09	99.4	92.4	12.9	81	91	104	130	160	207	238	316	355	407	1.0	2.6
489	6	66.5	.009	-	2.07	99.2	92.3	12.9	82	90	102	124	150	201	238	311	346	391	1.0	2.1
490	17	62.7	.042	3	2.61	98.8	91.0	12.5	82	95	109	134	163	218	262	328	358	410	1.1	3.2
491	4	65.9	.049	2	3.16	100.5	91.6	13.2	91	97	109	136	164	212	243	307	343	382	.9	2.9
492	7	63.9	.017	1	2.36	98.7	92.0	11.9	82	93	107	133	163	215	251	320	351	401	.9	2.3
493	6	68.5	.012	1	2.32	99.8	92.1	12.3	80	96	111	133	158	207	251	319	353	405	.7	2.6
494	15	63.6	.053	3	3.10	99.0	90.2	12.3	82	94	111	136	162	211	258	327	356	416	1.0	2.5
495	7	65.7	.010	1	2.19	99.1	92.6	12.7	83	93	106	130	158	214	254	320	352	396	.9	2.3
AVERAGE		65.1	.023	2	2.49	99.3	91.6	12.6	83	94	108	132	160	212	251	319	350	401	.9	2.6
SAMPLES	107																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 15 PACIFIC NORTHWEST
WESTERN WASH. AND WESTERN OREG.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
										PERCENT EVAPORATED										
496	1	61.4	0.010	3	2.18	93.2	87.3	12.9	78	90	98	117	144	203	268	347	374	397	1.0	2.0
497	10	63.1	.032	3	1.76	94.4	86.2	12.5	82	94	109	131	155	204	255	336	369	415	.9	2.0
498	3	65.5	.019	-	1.53	91.0	84.8	12.7	86	92	104	123	144	190	240	322	356	405	.8	2.7
499	7	63.9	.016	4	2.13	93.4	86.5	12.4	82	93	104	124	146	195	248	332	366	408	.9	2.3
500	7	64.5	.019	2	2.25	93.4	86.3	12.3	87	93	105	127	152	198	246	330	364	399	.9	2.8
501	11	64.8	.028	2	2.14	93.7	86.6	12.4	82	95	111	132	156	203	254	338	375	423	1.0	2.0
502	10	62.5	.010	4	2.00	93.1	86.9	13.6	80	93	109	130	155	208	265	340	370	417	1.0	2.9
503	10	63.4	.025	3	2.07	93.7	86.8	12.2	84	95	110	132	154	201	250	332	368	420	1.2	2.2
504	10	64.1	.016	1	2.20	93.3	86.5	13.0	85	96	112	136	159	207	257	334	366	413	1.2	2.6
505	10	62.5	.026	1	2.25	94.1	86.6	11.6	87	97	113	134	156	202	252	334	369	422	1.2	2.2
AVERAGE		63.6	.020	3	2.05	93.3	86.5	12.6	83	94	108	129	152	201	254	335	368	412	1.0	2.4
SAMPLES	79																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 15 PACIFIC NORTHWEST--CONTINUED
WESTERN WASH. AND WESTERN OREG.

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
506	1	65.4	0.010	3	1.93	99.6	92.6	11.7	80	95	104	121	143	186	226	294	322	368	1.0	1.0
507	10	65.8	.016	3	2.57	100.3	91.8	11.8	85	97	114	138	163	211	254	321	356	409	.9	2.3
508	3	64.0	.009	-	2.34	100.0	91.7	12.4	81	90	104	128	154	204	241	300	325	388	.7	2.3
509	7	63.9	.012	4	2.52	100.0	91.7	12.0	84	94	105	126	150	198	241	306	335	385	.8	3.0
510	7	63.2	.010	1	2.05	100.0	91.8	13.2	82	90	103	126	155	213	255	312	334	386	.8	3.3
511	10	63.3	.013	2	2.58	100.3	91.7	12.5	85	97	118	137	163	213	258	326	360	413	.9	2.7
512	10	65.9	.006	2	1.85	99.7	92.0	11.9	85	96	111	133	156	201	245	314	346	399	.9	2.6
513	10	65.0	.017	1	2.17	99.9	91.9	11.9	87	97	113	136	160	209	254	322	354	410	1.0	2.0
514	10	63.2	.009	1	1.91	100.0	91.4	12.7	85	95	111	133	158	210	258	323	352	405	1.0	2.3
515	10	61.7	.014	1	2.61	100.2	91.8	11.5	88	97	113	138	164	213	257	325	357	413	1.0	2.0
AVERAGE		64.1	.012	2	2.25	100.0	91.8	12.2	84	95	109	132	157	206	249	314	344	398	.9	2.4
SAMPLES	78																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 16 NORTH CALIFORNIA

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
516	9	58.4	0.040	2	2.70	94.7	86.0	10.6	86	101	117	142	166	215	266	343	373	413	1.1	2.2
517	3	62.7	.011	-	1.96	91.7	85.7	11.6	86	98	108	125	143	190	246	291	319	370	.7	1.8
518	6	61.9	.022	1	1.11	94.6	85.5	12.6	87	98	108	126	147	198	255	328	356	388	1.1	1.3
519	1	66.3	.010	1	2.29	92.2	87.5	11.6	90	103	113	131	149	187	231	278	299	350	1.0	1.0
520	8	61.2	.044	2	3.08	94.5	86.3	11.4	87	99	115	139	163	209	256	335	368	409	1.0	2.2
521	9	60.5	.013	2	1.20	94.3	85.8	12.1	83	96	111	136	162	213	267	346	377	419	1.1	2.1
522	3	60.6	.055	-	1.81	91.5	85.0	9.5	92	110	128	152	174	215	262	346	380	431	1.0	1.0
523	9	62.5	.032	1	2.19	93.7	86.9	11.5	87	100	115	137	158	202	250	329	363	426	1.1	1.8
524	9	63.8	.017	2	1.92	93.7	87.2	11.6	86	99	113	134	154	196	240	318	359	415	1.1	2.0
525	9	59.4	.044	2	1.35	94.6	85.2	11.0	87	101	118	143	168	221	275	342	370	415	1.0	2.1
526	9	59.3	.046	2	2.59	93.8	86.5	10.7	87	100	118	142	166	213	264	336	372	426	1.0	1.9
AVERAGE		61.5	.030	2	2.02	93.6	86.1	11.3	87	100	115	137	159	205	256	327	358	406	1.0	1.8
SAMPLES	75																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 16 NORTH CALIFORNIA--CONTINUED

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
527	9	58.7	0.016	1	2.80	100.0	91.6	10.7	87	102	118	146	172	219	266	336	364	408	1.0	2.4
528	3	58.8	.007	-	2.88	100.0	92.9	12.6	82	91	103	124	146	198	248	306	330	379	.7	2.3
529	6	66.8	.020	2	2.53	100.1	91.5	12.8	84	94	103	125	144	191	232	307	343	383	1.0	2.0
530	1	61.9	.010	2	3.60	100.2	94.0	11.8	92	99	106	123	143	189	243	295	315	354	1.0	2.0
531	8	59.3	.013	1	2.72	100.0	91.9	11.2	87	99	115	141	169	220	268	336	364	404	1.1	2.5
532	9	58.2	.010	3	2.29	100.1	91.2	11.2	85	96	113	140	166	216	262	333	361	414	1.0	2.8
533	3	61.5	.034	-	2.93	99.5	92.5	10.6	88	100	117	144	168	209	246	310	338	407	.7	2.3
534	9	61.5	.014	1	2.89	99.6	91.5	11.7	87	99	113	134	155	198	247	331	364	419	1.1	1.9
535	9	61.2	.011	2	2.98	99.8	91.2	11.4	86	99	113	135	156	202	252	333	362	414	1.0	1.7
536	8	60.9	.017	2	2.29	99.6	91.7	10.9	88	101	117	142	167	215	261	328	356	413	1.0	1.9
537	9	61.8	.025	1	3.06	99.4	92.5	10.9	85	99	117	144	169	215	255	323	353	414	1.1	2.4
AVERAGE		61.0	.016	2	2.82	99.8	92.0	11.4	86	98	112	136	160	207	253	322	350	401	1.0	2.2
SAMPLES	74																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 17 SOUTH CALIFORNIA

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
538	8	58.2	0.140	3	2.51	94.7	85.5	12.6	81	92	109	135	164	218	274	346	378	418	1.0	3.7
539	4	62.9	.017	1	2.54	90.5	85.6	12.1	84	98	11[illegible]	143	165	201	234	280	311	372	1.2	2.6
540	5	59.1	.128	2	2.26	94.0	85.1	12.2	82	93	10[illegible]	130	158	215	274	347	375	412	1.0	2.0
541	4	59.6	.070	1	1.18	90.4	84.0	11.5	86	98	116	140	164	213	263	337	370	423	1.1	3.1
542	6	59.4	.138	2	2.33	94.1	85.0	11.0	86	100	113	136	159	206	261	346	378	407	1.2	1.6
543	1	63.6	.090	2	2.72	90.8	84.7	12.1	82	96	109	132	155	197	246	332	369	404	1.3	1.7
544	9	60.0	.131	2	2.37	94.2	85.6	10.7	88	101	116	137	159	206	259	345	378	423	1.0	1.9
545	4	62.2	.115	3	2.44	91.0	84.3	11.4	87	97	110	132	154	201	255	343	375	405	1.2	2.1
546	8	57.1	.060	1	1.52	93.3	85.1	10.0	89	98	113	133	155	208	284	358	387	427	1.0	1.7
547	9	63.1	.151	2	2.62	93.8	85.0	9.4	92	103	118	138	157	196	241	327	362	411	1.1	1.4
548	9	57.8	.064	1	1.66	94.2	85.1	10.2	87	101	117	142	167	219	269	341	370	411	1.0	1.9
549	8	58.4	.096	1	2.17	94.1	86.0	11.2	87	100	116	139	163	210	269	356	398	430	1.2	3.1
AVERAGE		60.1	.100	2	2.19	92.9	85.1	11.2	86	98	113	136	160	208	261	338	371	412	1.1	2.2
SAMPLES	75																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1969-70, AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 17 SOUTH CALIFORNIA--CONTINUED

PREMIUM-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
550	8	59.5	0.052	2	2.78	99.9	91.2	12.5	84	94	110	134	159	215	266	331	353	410	1.0	2.9
551	4	55.4	.014	1	3.02	100.2	91.6	10.6	88	103	124	158	186	231	271	321	343	401	1.2	2.3
552	5	59.3	.035	1	2.96	100.0	91.7	12.5	82	93	105	129	156	213	262	326	355	404	1.0	1.7
553	4	58.6	.040	1	2.98	99.7	92.0	11.6	86	97	115	140	164	214	266	336	363	422	1.1	3.5
554	6	57.5	.038	1	2.87	100.2	91.5	11.5	87	103	117	145	174	225	271	331	359	400	1.1	1.9
555	1	57.7	.030	1	2.96	100.2	91.3	11.6	82	95	111	137	166	217	264	324	349	392	1.3	2.7
556	9	58.6	.039	4	2.56	100.0	91.3	10.2	91	102	117	142	167	214	262	331	364	416	1.1	1.9
557	4	57.5	.024	1	2.94	100.1	91.8	11.6	84	94	109	135	163	220	271	328	350	391	1.1	2.2
558	8	57.8	.063	1	2.49	100.4	90.9	11.0	84	97	114	140	165	215	262	332	363	420	1.0	2.3
559	9	60.2	.062	2	2.82	99.8	90.9	10.4	87	99	113	133	154	204	256	324	358	410	1.0	1.6
560	9	58.9	.057	3	2.49	99.3	91.9	10.4	86	99	115	140	165	215	265	334	367	418	1.1	1.9
561	9	56.6	.033	1	2.98	99.4	91.4	11.7	86	98	114	141	168	221	270	338	374	420	1.2	3.0
AVERAGE		58.1	.041	2	2.82	99.9	91.5	11.3	86	98	114	140	166	217	266	330	358	409	1.1	2.3
SAMPLES	76																			

TABLE 4 - MOTOR GASOLINE SURVEY, WINTER 1969-70,
AVERAGE DATA FOR BRANDS IN EACH DISTRICT

REGULAR-PRICE GASOLINE

DISTRICT NO. AND NAME	NO. OF BRANDS	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
1 NORTHEAST	15	70	63.1	0.047	1	2.30	95.0	86.9	12.6	81	93	107	128	151	201	261	342	372	412	1.0	2.6
2 MID ATL COAST	20	293	62.5	.038	1	2.10	95.0	86.6	12.7	80	93	106	128	151	202	262	343	376	413	.9	2.4
3 SOUTHEAST	20	243	62.4	.031	2	2.27	94.7	86.6	11.4	84	98	112	134	156	206	263	343	376	416	.9	1.7
4 APPALACHIAN	21	195	62.9	.037	2	2.20	94.6	87.1	12.8	79	92	107	129	152	202	259	334	366	408	.9	2.2
5 MICHIGAN	19	115	63.8	.039	2	2.50	94.7	86.9	13.1	77	91	104	126	150	203	259	340	375	419	.8	2.9
6 NORTH ILLINOIS	16	120	64.2	.037	1	2.54	94.5	86.9	12.7	82	93	105	124	146	197	252	330	363	405	.9	2.1
7 CENTRAL MISS	19	101	63.1	.063	2	2.43	94.7	87.2	12.5	80	92	106	127	150	201	259	340	372	412	.9	2.1
8 LOWER MISS	19	174	62.4	.034	1	2.27	94.3	86.6	11.6	83	96	108	128	150	199	256	338	371	414	1.1	1.7
9 NORTH PLAINS	15	76	64.4	.055	2	1.73	92.4	85.1	12.2	83	94	105	123	144	191	245	325	357	401	.9	2.1
10 CENTRAL PLAINS	11	122	64.8	.026	1	2.11	92.3	85.8	12.3	85	96	109	130	152	201	256	336	375	417	1.0	2.3
11 SOUTH PLAINS	20	168	64.0	.031	1	2.41	93.0	86.4	11.8	84	99	110	129	150	197	249	335	372	413	1.0	1.8
12 SOUTHERN TEXAS	16	109	63.4	.036	2	2.69	94.1	87.4	11.2	88	102	114	135	156	201	250	326	362	406	.9	1.5
13 SOUTH MOUNTAIN STATES	22	348	62.4	.056	1	2.35	92.2	85.1	11.0	86	99	114	136	159	206	256	330	363	408	.9	1.8
14 NORTH MOUNTAIN STATES	12	107	62.8	.054	2	2.19	93.0	85.6	12.5	82	95	109	132	158	208	259	332	365	413	1.0	2.5
15 PACIFIC NORTHWEST	10	79	63.6	.020	3	2.05	93.3	86.5	12.6	83	94	108	129	152	201	254	335	368	412	1.0	2.4
16 NORTHERN CALIFORNIA	11	75	61.5	.030	2	2.02	93.6	86.1	11.3	87	100	115	137	159	205	256	327	358	406	1.0	1.8
17 SOUTHERN CALIFORNIA	12	75	60.1	.100	2	2.19	92.9	85.1	11.2	86	98	113	136	160	208	261	338	371	412	1.1	2.2
AVERAGE			63.0	.043	2	2.26	93.8	86.3	12.1	83	96	109	130	153	202	256	335	368	411	1.0	2.1

SAMPLES 2,470

TABLE 4 - MOTOR GASOLINE SURVEY, WINTER 1969-70,
AVERAGE DATA FOR BRANDS IN EACH DISTRICT--CONTINUED

PREMIUM-PRICE GASOLINE

DISTRICT NO. AND NAME	NO. OF BRANDS	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
1 NORTHEAST	15	68	61.9	0.015	1	2.72	100.3	92.0	12.7	78	90	105	127	151	210	259	323	354	399	1.0	2.8
2 MID ATL COAST	20	296	61.5	.020	1	2.61	100.6	91.9	12.9	80	93	106	128	154	213	261	324	353	397	.9	2.7
3 SOUTHEAST	20	242	61.8	.014	2	2.85	100.4	92.3	11.6	84	97	112	134	158	213	262	327	359	405	.9	1.8
4 APPALACHIAN	22	195	63.1	.011	1	2.70	100.1	92.5	12.9	79	92	106	129	155	207	253	322	353	400	.8	2.1
5 MICHIGAN	20	114	64.7	.019	1	2.68	99.9	92.9	12.8	79	90	105	130	157	209	250	322	363	411	.7	2.8
6 NORTH ILLINOIS	16	122	64.3	.014	1	2.76	99.5	92.6	12.6	82	94	106	128	154	206	250	320	353	403	.9	2.3
7 CENTRAL MISS	20	102	63.6	.007	1	2.94	100.0	92.7	12.4	80	93	108	132	159	211	252	321	352	400	.8	2.2
8 LOWER MISS	19	174	62.7	.020	1	2.87	100.1	92.3	11.8	83	94	107	128	153	206	253	322	351	401	1.0	1.9
9 NORTH PLAINS	15	76	65.6	.042	2	2.34	99.0	92.2	11.9	84	96	110	135	162	209	245	317	347	402	1.0	2.3
10 CENTRAL PLAINS	11	122	66.2	.018	1	2.60	98.9	92.5	12.1	85	97	111	135	160	209	251	329	367	413	1.0	2.4
11 SOUTH PLAINS	20	168	63.7	.022	1	2.81	99.6	92.8	12.0	84	97	109	132	157	209	255	325	359	399	1.0	2.1
12 SOUTHERN TEXAS	17	113	61.8	.020	1	2.94	100.0	92.5	11.4	86	100	114	136	161	210	256	324	354	398	.9	1.7
13 SOUTH MOUNTAIN STATES	23	348	60.8	.020	1	2.90	98.8	91.3	11.1	85	98	115	141	168	217	263	332	363	411	1.0	2.2
14 NORTH MOUNTAIN STATES	12	107	65.1	.023	2	2.49	99.3	91.6	12.6	83	94	108	132	160	212	251	319	350	401	.9	2.6
15 PACIFIC NORTHWEST	10	78	64.1	.012	2	2.25	100.0	91.8	12.2	84	95	109	132	157	206	249	314	344	398	.9	2.4
16 NORTHERN CALIFORNIA	11	74	61.0	.016	2	2.82	99.8	92.0	11.4	86	98	112	136	160	207	253	322	350	401	1.0	2.2
17 SOUTHERN CALIFORNIA	12	76	58.1	.041	2	2.82	99.9	91.5	11.3	86	98	114	140	166	217	266	330	358	409	1.1	2.3
AVERAGE			62.9	.020	1	2.71	99.8	92.2	12.1	83	95	109	133	158	210	255	323	355	403	.9	2.3
SAMPLES 2,475																					

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1969-70, DATA FOR SOME ADDITIONAL GRADES

THIRD-GRADE GASOLINE

DISTRICT AND ITEM NUMBERS	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	PERCENT EVAPORATED 5	10	20	30	50	70	90	95	EP	RES %	LOSS %
1 562	1	60.0	-	-	1.22	94.0	85.7	-	-	-	-	-	-	-	-	-	-	-	-	-
1 563	3	60.9	0.041	1	1.57	93.8	85.3	11.7	84	92	109	131	156	209	269	347	374	410	1.0	3.0
1 564	1	60.9	.053	2	1.68	94.2	85.2	10.6	80	-	106	130	153	203	263	341	-	413	1.0	4.0
1 565	1	61.9	.024	2	1.38	92.8	85.4	12.7	82	-	100	119	140	195	266	354	-	410	1.0	5.0
2 566	1	64.0	-	-	2.43	96.6	88.8	-	-	-	-	-	-	-	-	-	-	-	-	-
2 567	13	61.7	.034	1	1.47	93.0	85.3	12.7	78	96	108	127	155	216	285	353	384	421	1.3	3.5
2 568	2	63.0	.025	2	1.43	93.5	85.8	13.5	81	89	103	121	143	199	267	353	382	414	1.3	3.3
3 569	7	62.8	.024	2	1.79	92.6	85.0	10.7	82	103	119	140	162	204	248	312	353	416	1.0	1.0
3 570	6	61.8	-	-	1.81	92.6	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-
3 571	1	59.5	.030	2	1.38	93.1	85.5	9.9	82	95	110	132	153	214	282	362	390	419	1.0	2.0
4 572	9	61.5	-	-	1.31	93.1	85.7	-	-	-	-	-	-	-	-	-	-	-	-	-
5 573	3	62.8	.030	3	1.33	93.2	86.2	14.3	78	81	97	119	144	200	262	346	393	448	.1	3.9
5 574	2	61.1	.029	2	1.49	93.1	85.8	14.3	79	83	99	127	157	219	286	368	408	438	.8	4.2
6 575	2	65.0	-	-	2.33	94.6	86.9	-	-	-	-	-	-	-	-	-	-	-	-	-
7 576	7	61.4	-	-	1.54	92.8	85.7	-	-	-	-	-	-	-	-	-	-	-	-	-
7 577	3	63.0	-	-	2.29	91.8	86.1	-	-	-	-	-	-	-	-	-	-	-	-	-
8 578	9	60.6	.068	-	1.44	92.0	85.0	-	-	-	-	-	-	-	-	-	-	-	-	-
11 579	3	61.7	-	-	1.70	92.1	85.1	-	-	-	-	-	-	-	-	-	-	-	-	-
12 580	10	63.3	.040	1	2.39	92.7	87.0	10.5	84	108	119	139	158	200	253	356	404	413	1.0	2.5
13 581	3	60.3	.071	-	1.99	92.6	85.2	-	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE		61.9	.039	2	1.70	93.2	85.8	12.1	81	93	107	129	152	206	268	349	386	420	1.0	3.2
SAMPLES	87																			

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1969-70, DATA FOR SOME ADDITIONAL GRADES--CONTINUED

INTERMEDIATE-GRADE GASOLINE

DISTRICT AND ITEM NUMBERS	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
1 582	3	63.3	-	-	1.71	96.7	87.1	-	-	-	-	-	-	-	-	-	-	-	-	-
2 583	16	63.0	0.043	3	1.61	97.1	86.8	14.0	75	82	94	112	139	202	265	338	368	413	1.0	4.0
3 584	3	62.3	-	-	2.34	96.4	87.9	-	-	-	-	-	-	-	-	-	-	-	-	-
3 585	3	61.1	-	-	1.47	97.0	86.7	-	-	-	-	-	-	-	-	-	-	-	-	-
4 586	6	64.7	-	-	2.04	97.0	88.2	-	-	-	-	-	-	-	-	-	-	-	-	-
7 587	3	62.9	-	-	1.38	96.6	86.9	-	-	-	-	-	-	-	-	-	-	-	-	-
8 588	15	62.1	.029	-	2.05	96.7	88.3	-	-	-	-	-	-	-	-	-	-	-	-	-
11 589	3	63.8	-	-	1.70	96.1	88.3	-	-	-	-	-	-	-	-	-	-	-	-	-
12 590	10	63.4	.016	1	2.30	96.5	88.4	11.5	83	112	122	127	143	200	248	310	337	368	1.0	2.0
13 591	6	65.2	.014	-	2.39	94.1	87.3	-	-	-	-	-	-	-	-	-	-	-	-	-
13 592	1	58.9	.120	1	2.46	96.7	88.1	10.8	101	109	119	142	168	219	269	339	376	422	1.0	2.0
15 593	3	63.7	.019	-	2.39	95.6	88.2	-	-	-	-	-	-	-	-	-	-	-	-	-
16 594	1	65.9	.010	1	2.90	96.1	90.1	11.7	95	103	111	129	148	185	233	287	309	352	1.0	2.0
17 595	3	58.4	.096	-	2.38	96.1	86.7	-	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE		62.8	.043	2	2.08	96.3	87.8	12.0	89	102	112	128	150	202	254	319	348	389	1.0	2.5
SAMPLES	76																			

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1969-70, DATA FOR SOME ADDITIONAL GRADES--CONTINUED

SUPER-PREMIUM GASOLINE

DISTRICT AND ITEM NUMBERS	SAMPLES	GR., ASTM D287 API	SULF, ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NO RES, ASTM D908	OCTANE NO MOT, ASTM D357	RVP, ASTM D323 LB	DISTILLATION, ASTM D86 TEMPERATURE, F (CORRECTED TO 760 MM HG) IBP	5	10	20	30	50	70	90	95	EP	RES %	LOSS %
1 596	1	62.1	0.007	2	2.79	103.0	94.4	12.5	76	83	99	121	148	206	249	309	343	394	1.0	3.0
2 597	2	63.6	.012	2	2.34	102.5	93.7	13.1	80	87	100	122	149	209	256	315	346	394	1.0	3.0
3 598	1	60.9	.006	2	3.40	103.0	94.5	10.6	84	96	110	134	160	218	259	318	348	405	1.0	2.0
5 599	1	59.5	.010	1	2.62	102.4	94.5	13.7	80	89	105	132	165	226	263	309	352	391	.4	2.6
13 600	1	63.6	.050	0	3.17	102.0	93.9	7.1	91	119	135	154	173	211	237	289	329	388	1.0	1.0
14 601	1	70.7	.010	1	2.19	100.1	96.4	7.5	94	120	131	151	168	205	226	267	304	396	1.0	1.0
15 602	1	61.6	.010	4	2.97	101.7	95.1	7.7	96	120	130	146	168	215	243	314	344	396	1.0	1.0
16 603	1	61.4	.010	2	3.07	101.3	95.2	7.9	104	117	127	142	158	200	239	311	332	379	1.0	1.0
17 604	1	68.3	.080	2	3.17	102.3	95.6	7.0	96	128	138	157	173	203	224	292	377	400	1.0	1.0
AVERAGE		63.5	.022	2	2.86	102.0	94.8	9.7	89	107	119	140	162	210	244	303	342	394	.9	1.7
SAMPLES	10																			

TABLE 6.--Cumulative percents of samples of all grades by research octane numbers by districts, motor-gasoline survey, winter 1969-70

Research octane number	District																	Cumulative total samples
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
89													0.3					2
90										0.4			2.1	2.8			1.9	25
91							0.5	0.8	0.7	2.5		0.8	6.8	7.9	1.9	1.3	8.4	96
92		0.5	1.4		0.4	0.8	2.3	1.6	32.9	34.0	19.3	2.1	27.3	21.9	1.9	4.6	9.0	492
93	0.7	1.9	4.2	3.0	3.0	2.5	4.6	6.7	50.0	49.6	38.3	8.7	36.9	30.2	24.2	7.9	14.8	843
94	11.5	12.2	23.3	20.2	18.7	21.7	23.1	34.7	50.0	50.0	48.5	36.4	47.5	45.1	46.6	33.1	38.7	1,639
95	42.6	40.6	48.6	46.4	46.4	45.1	49.1	48.4	50.0	50.0	50.0	47.5	50.6	49.8	48.4	49.0	48.4	2,431
96	50.0	49.0	50.4	50.6	50.6	50.0	51.4	50.0	50.0	50.0	50.9	51.7	51.1	50.7	50.9	50.3	50.3	2,580
97	53.4	51.4	51.8	51.9	51.1	50.0	52.8	53.2	50.0	51.2	50.9	53.7	60.7	58.6	50.9	50.3	50.3	2,721
98	53.4	52.2	52.2	51.9	51.5	51.2	53.2	53.2	51.3	57.4	52.9	53.7	62.9	63.7	50.9	50.3	51.0	2,785
99	55.4	53.3	53.4	54.8	62.6	71.7	61.1	55.6	98.7	95.9	74.3	55.8	76.5	76.7	51.6	56.3	57.4	3,303
100	85.8	78 0	86.4	88.1	95.7	100.0	94.4	94.9	100.0	100.0	99.4	95.5	99.9	95.8	95.0	99.3	96.1	4,764
101	98.6	99.5	98.4	100.0	99.6		100.0	99.7			100.0	99.2	99.9	100.0	99.4	100.0	99.4	5,098
102	99.3	99.8	99.8		100.0			100.0				100.0	100.0		100.0		100.0	5,115
103	100.0	100.0	100.0															5,118

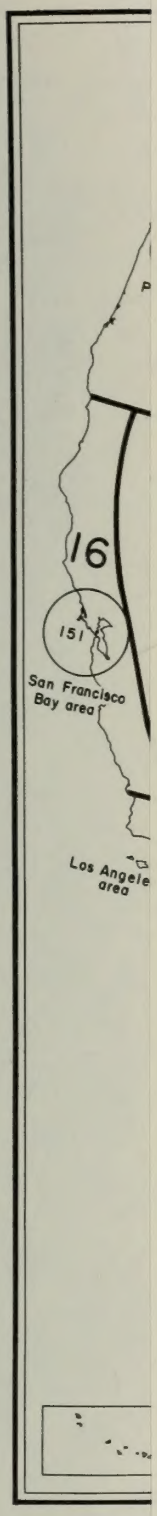
TABLE 7.--Cumulative percents of samples of all grades by motor octane numbers by districts, motor-gasoline survey, winter 1969-70

Motor octane number	District																Cumulative total samples
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
82													0.1	0.9				3
83									2.6				.7	6.0				22
84	0.7	0.3	0.2		0.4	0.8		0.8	11.8	3.7	1.2		7.4	12.1	0.6	1.3	4.5	129
85	4.7	5.0	2.6	1.0	.9	2.5	0.9	2.7	35.5	15.2	9.6	0.4	24.5	23.7	2.5	9.3	34.2	495
86	24.3	21.7	25.3	9.6	14.5	16.0	8.8	24.2	50.0	42.6	27.5	10.7	43.7	36.3	23.0	32.5	48.4	1,368
87	44.6	46.7	44.1	40.2	43.0	41.8	37.0	44.1	50.0	50.0	47.7	27.3	49.5	48.8	47.2	45.7	50.3	2,295
88	52.0	51.2	51.2	49.9	51.1	48.8	51.4	50.8	50.7	50.4	50.0	46.3	52.6	50.7	50.9	49.7	50.3	2,595
89	54.1	52.0	52.0	51.9	51.1	50.0	52.8	52.4	52.0	50.8	50.9	53.3	56.9	58.1	50.9	49.7	50.3	2,696
90	56.1	53.1	52.6	52.8	51.5	50.0	52.8	53.8	52.0	51.6	50.9	54.5	61.0	66.5	50.9	51.0	52.3	2,776
91	63.5	64.2	56.9	56.0	54.5	51.6	56.5	59.9	59.9	53.7	56.7	56.6	66.9	76.7	60.2	66.9	76.8	3,116
92	83.1	89.1	78.7	77.8	77.0	73.0	77.3	78.0	90.1	75.8	71.1	70.2	80.8	87.4	97.5	90.7	96.8	4,145
93	99.3	99.7	97.0	96.5	94.5	95.1	94.9	97.8	95.4	93.4	90.6	95.9	91.7	94.0	99.4	98.0	99.4	4,900
94	100.0	99.8	99.4	99.5	99.1	100.0	99.5	100.0	99.3	98.4	99.4	98.8	98.0	99.5	99.4	99.3	99.4	5,081
95		100.0	99.8	100.0	100.0		100.0		100.0	100.0	100.0	100.0	100.0	99.5	100.0	100.0	99.4	5,115
96			100.0											100.0			100.0	5,118

TABLE 8. - Locations and numbers of samples, motor gasoline survey, winter 1969-70

State	Location	Samples
District 1 (Northeast)		
Maine	Portland	28
Massachusetts	Boston area	120
	2 locations	148
District 2 (Mid-Atlantic Coast)		
Connecticut	Hartford	71
Maryland	Baltimore	82
New Jersey and New York	New York City area	195
New York	Albany	24
Pennsylvania	Harrisburg	11
Pennsylvania and New Jersey	Philadelphia area	146
Virginia	Richmond	94
	7 locations	623
District 3 (Southeast)		
Alabama	Birmingham	60
	Mobile	30
Florida	Jacksonville	25
	Miami area	139
	Tampa	2
Georgia	Atlanta	118
North Carolina	Charlotte	78
	Wilmington	20
South Carolina	Charleston	4
Tennessee	Chattanooga	30
	10 locations	506
District 4 (Appalachian)		
New York	Buffalo	96
Ohio	Cincinnati	66
	Cleveland	89
	Lima	1
	Toledo	57
Pennsylvania	Northwest Pennsylvania	30
	Pittsburgh	50
West Virginia	Charleston	16
	8 locations	405
District 5 (Michigan)		
Michigan	Central Michigan	50
	Detroit	151
	Northern Peninsula	34
	3 locations	235
District 6 (North Illinois)		
Illinois and Indiana	Chicago area	113
Iowa	Davenport	56
Wisconsin	Madison	15
	Milwaukee	60
	4 locations	244
District 7 (Central Mississippi)		
Indiana	Evansville	36
	Indianapolis	45
Kentucky	Louisville	65
Missouri and Illinois	St. Louis area	70
	4 locations	216
District 8 (Lower Mississippi)		
Arkansas	Little Rock	80
Louisiana	Baton Rouge	24
	Lake Charles	2
	New Orleans	66
	Shreveport	50
Mississippi	Jackson	77
Tennessee	Memphis	73
	7 locations	372
District 9 (North Plains)		
Minnesota	Minneapolis-St. Paul	90
North Dakota	Fargo	44
	Williston	18
	3 locations	152
District 10 (Central Plains)		
Iowa	Des Moines	50
Kansas	Phillipsburg	10
Kansas and Missouri	Kansas City area	100
Nebraska	Omaha	76
	Scotts Bluff	8
	5 locations	244
District 11 (South Plains)		
Kansas	Coffeyville	6
	McPherson	10
	Wichita	62
Missouri	Springfield	30
Oklahoma	Bartlesville	6
	Oklahoma City	68
	Tulsa	62
Texas	Dallas-Fort Worth	78
	Tyler	10
	Wichita Falls	10
	10 locations	342
District 12 (Southern Texas)		
Texas	Corpus Christi	48
	Houston	148
	San Antonio	46
	3 locations	242
District 13 (South Mountain States)		
Arizona	Phoenix	74
	Tucson	14
California	Bakersfield	78
Colorado	Denver	99
Nevada	Las Vegas	24
	Reno	32
New Mexico	Albuquerque	89
Texas	Amarillo	81
	Big Spring	10
	El Paso	66
	Lubbock	36
	Midland	54
Utah	Salt Lake City	50
	13 locations	707
District 14 (North Mountain States)		
Idaho	Boise	20
Montana	Billings	64
	Great Falls	6
Washington	Spokane	92
Wyoming	Casper	33
	5 locations	215
District 15 (Pacific Northwest)		
Oregon	Portland	57
Washington	Seattle	104
	2 locations	161
District 16 (Northern California)		
California	San Francisco Bay area	151
	1 location	151
District 17 (Southern California and Hawaii)		
California	Los Angeles area	144
Hawaii	Honolulu	11
	2 locations	155
Total	89 locations	5,118

District	Locations	Samples	Percent
1	2	148	2.9
2	7	623	12.2
3	10	506	9.9
4	8	405	7.9
5	3	235	4.6
6	4	244	4.8
7	4	216	4.2
8	7	372	7.3
9	3	152	3.0
10	5	244	4.8
11	10	342	6.7
12	3	242	4.7
13	13	707	13.8
14	5	215	4.2
15	2	161	3.1
16	1	151	2.9
17	2	155	3.0
Total	89	5,118	100.0


16
151
San Francisco
Bay area
Los Angele
area

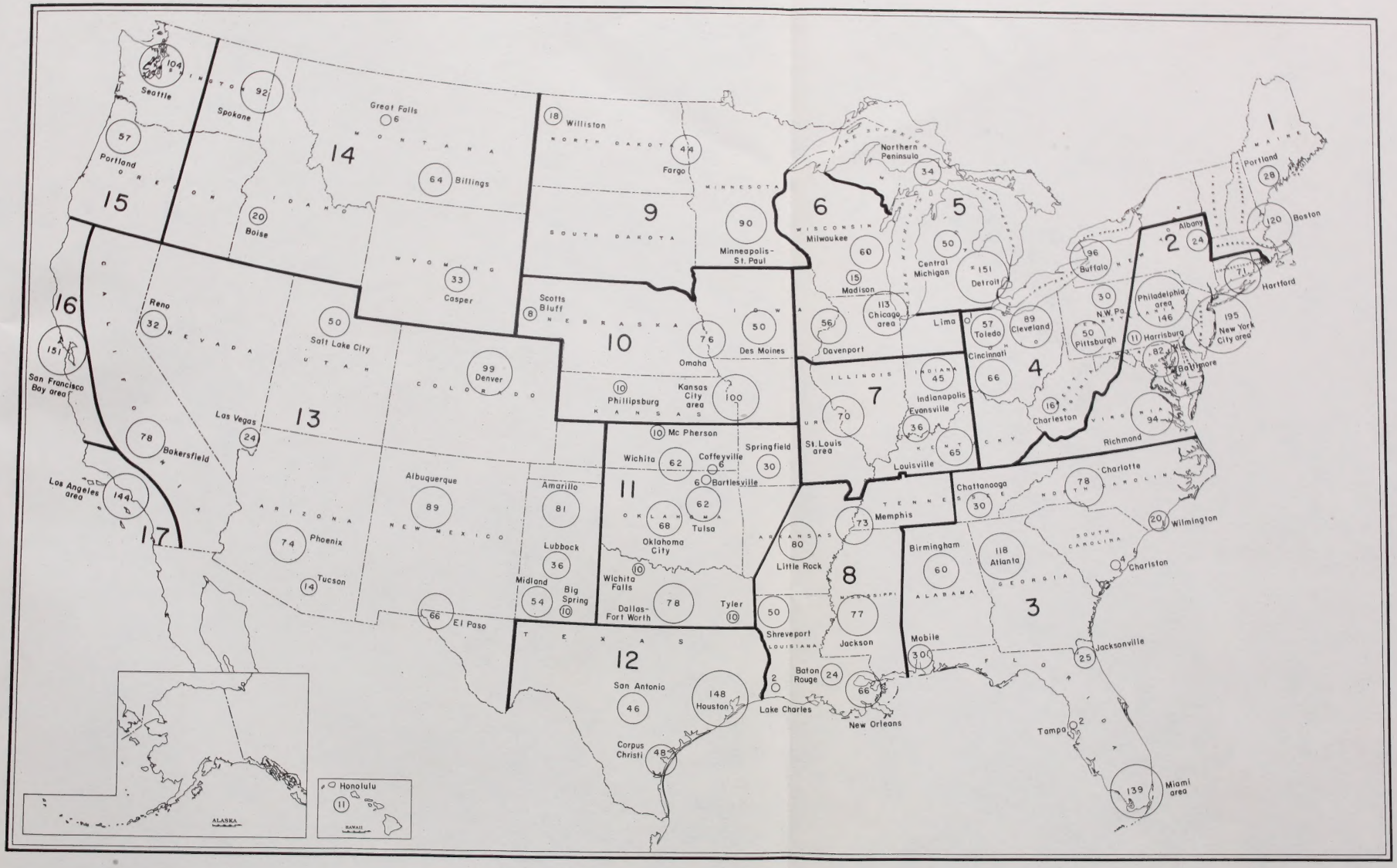


FIGURE 5.– Map Showing Locations and Numbers of Samples for the National Motor Gasoline Survey, Winter 1969-70

INT.-BU.OF MINES,PGH.,PA. 15290

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3 0112 084235941